

3

Results

In this section, we present a set of tables comparing FFS and MCO scores for our two sets of comparisons:

1. FFS versus MCO national Medicare populations, and
2. FFS versus MCO HOS respondents.

The tables are based on the analysis of the baseline Medicare FFS HOS in HER's Second Annual Report to HCFA for its project *Research and Analytic Support for Implementing Performance Measurement in Medicare Fee For Service* (McCall et al., 2000).

3.1 Comparison of Fee-for-Service and Managed Care Populations

We begin with a comparison of the FFS and MCO populations, because greatest interest attaches to this comparison. As discussed in Section 2.2, the FFS HOS single national FFS random sample is used to represent the national Medicare FFS population. HOS MCO respondents are weighted as discussed in Section 2.2 to represent the national Medicare managed care population. When we use the word "population" in this section, it should be understood as these samples representing their populations, not the true population values, which we cannot observe. We use this term (population) to distinguish our comparison in this section from the comparison of HOS respondents presented in the next section.

Figures 1 and 2 compare Medicare MCO and FFS enrollees' mean summary health scores to noninstitutionalized US population norms¹ by three age categories². Figure 1, which compares physical (PCS) scores, shows that both Medicare samples have markedly worse physical health than the entire US population, as would be expected of an aged and disabled population. Mean Medicare scores for the 65-74 and 75+ age ranges are comparable to the national norms, however, as would be expected since virtually all of the elderly are Medicare eligible.

Medicare MCO enrollees have 2.5 points better physical health than FFS enrollees³. Based on the discussion in Section 2.7, we would consider this a small, but clinically important difference.⁴ The overall MCO/FFS difference in physical scores is larger than the differences among the two specific age ranges, indicating that some of the better average health of MCO enrollees is due to a younger age mix. Holding age range constant, the MCO/FFS physical health difference is less than what we would consider "minimally clinically significant".

The mean mental component score (MCS) for the Medicare MCO population is higher than the US population norm, but the mean FFS MCS score is lower. Thus,

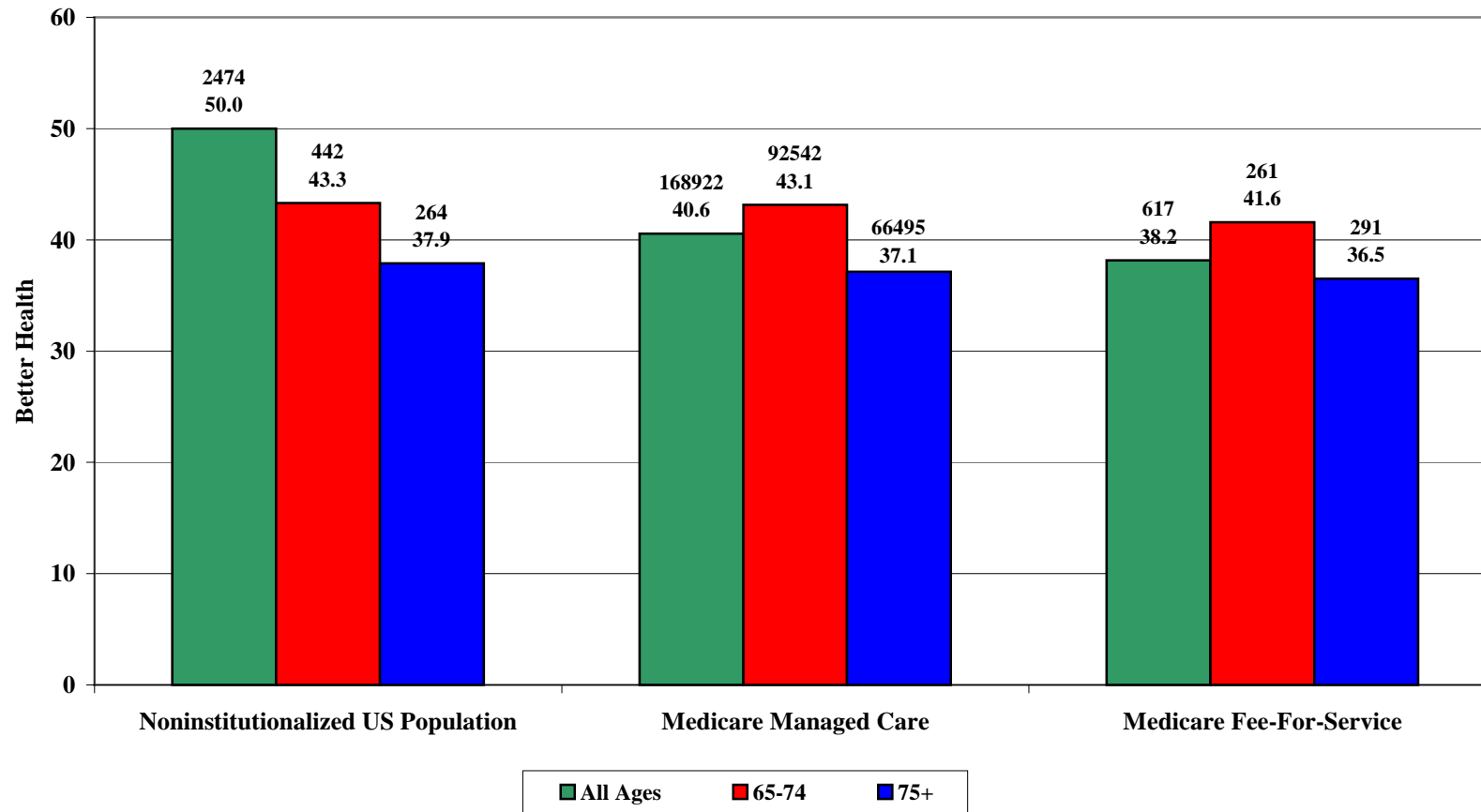
¹ Based on the results published by Ware *et al.*

² The Medicare totals include the under-age-65 disabled population (not shown separately) in addition to 65-74 and 75+ age ranges.

³ The difference is 2.5 rather than 2.4 because of rounding in the MCO and FFS mean scores. Referring to the "enrollment-weighted MCO" column versus the "national FFS sample, mean scores" column of Table 3, and the four SF-36 physical health subscales (PFS, RPS, BPS, and GHS), we see that MCO enrollees have better health on each

Figure 1

**Nationally Representative Comparison of Medicare Beneficiaries' Mean
Physical Component Scores to US Norms**

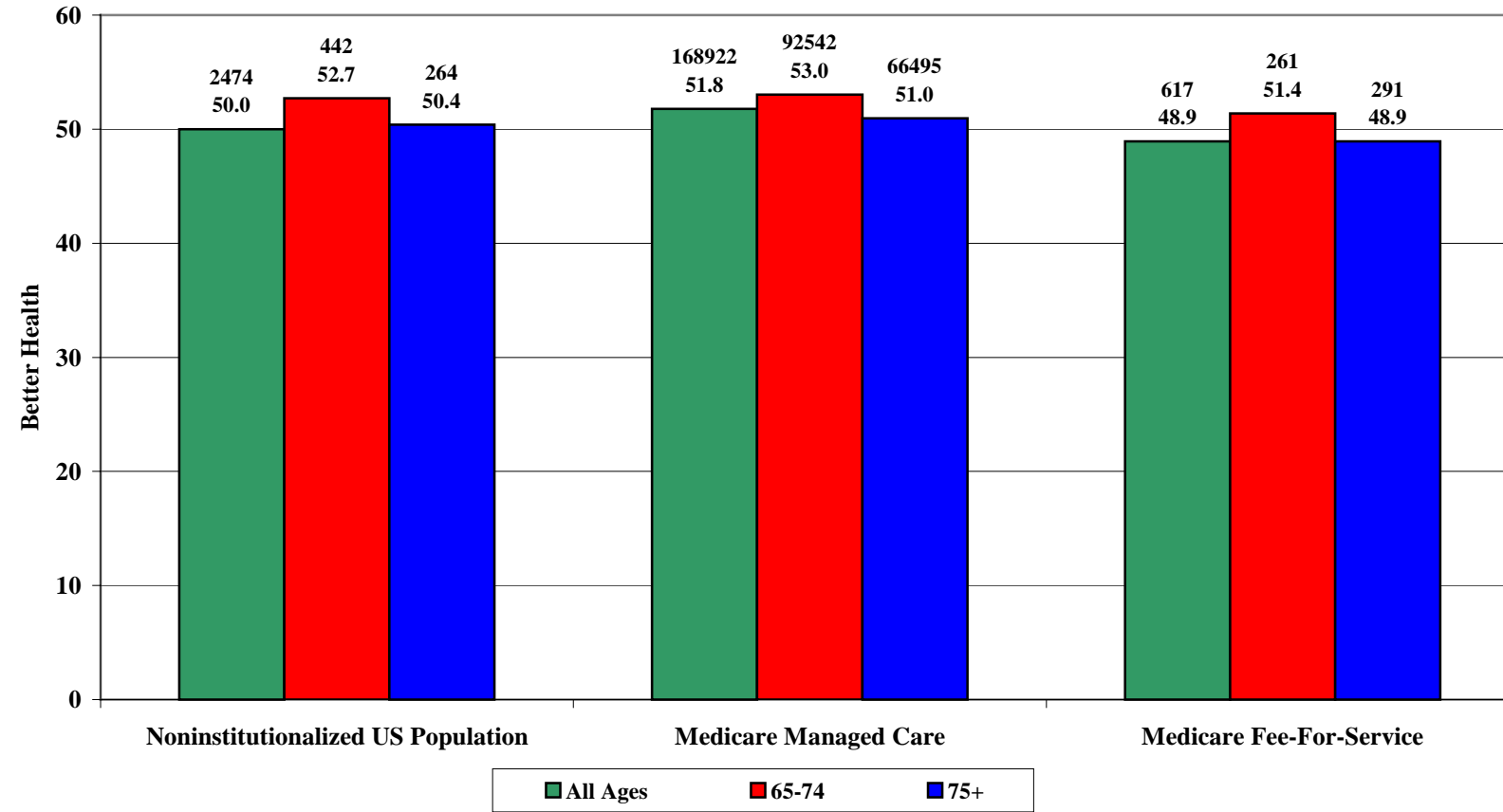


Weighted MCO data; FFS National Sample Only

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care
(May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 2

**Nationally Representative Comparison of Medicare Beneficiaries' Mean
Mental Component Scores to US Norms**



Weighted MCO data; FFS National Sample Only

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care
(May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Medicare MCO enrollees have better self-reported mental health than the US population as a whole, and than FFS Medicare enrollees. The MCO/FFS difference in mental health is 2.9 points, which is again a small, but clinically significant difference⁵. Controlling for age again lessens the FFS/MCO difference. The difference in mental health status between the Medicare population (considering both MCO and FFS enrollees together) and the entire US population is small, below the threshold for what we would consider clinically significant. It is striking that the mental health of the Medicare population is equivalent to that of entire US population, despite the much worse physical health of the Medicare population.

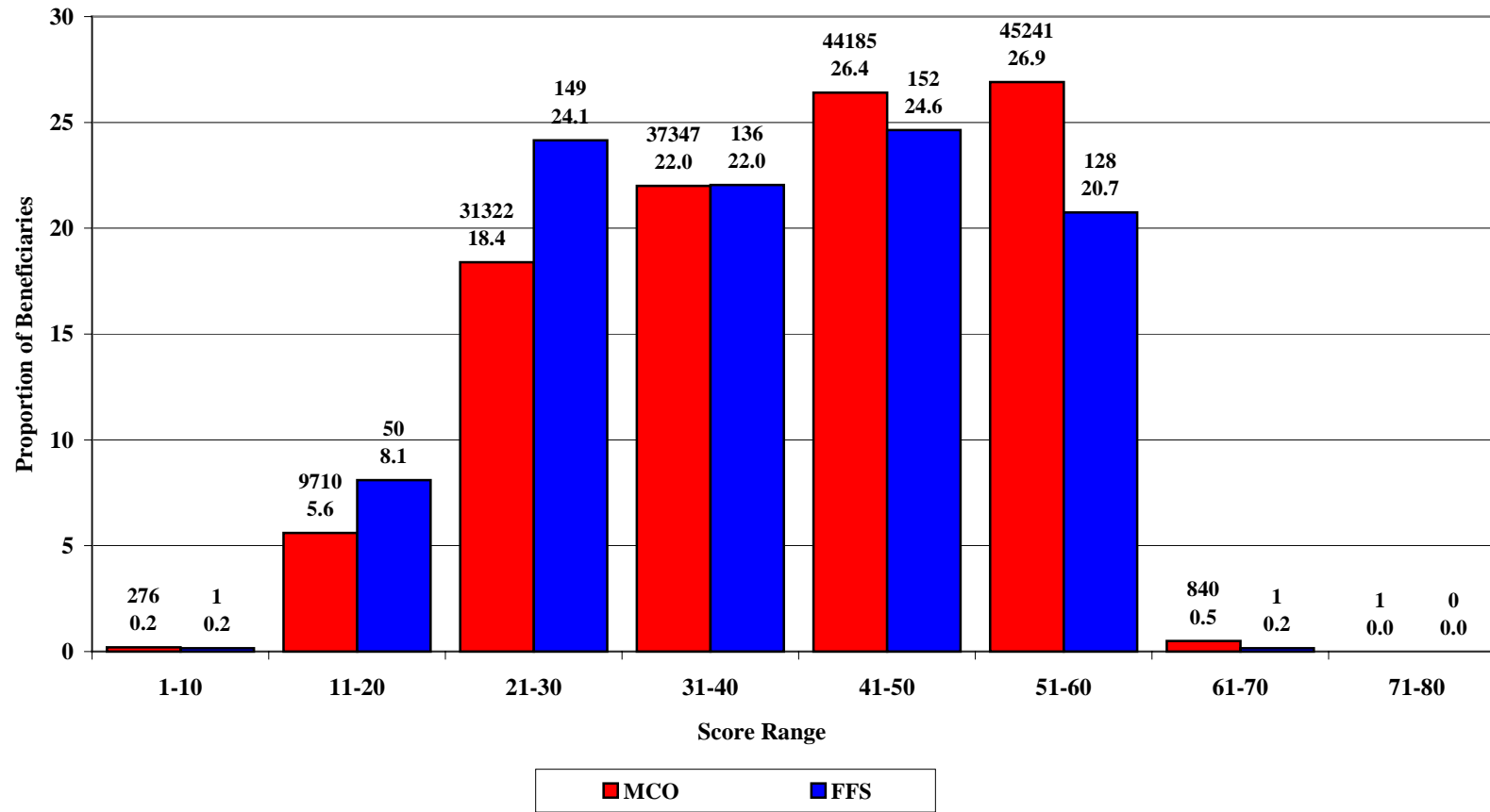
Figures 3 and 4 show the proportion of the FFS and MCO populations who scored in each ten-point range for the PCS and MCS. These figures show that the FFS population has greater representation in the lower score ranges, indicating poorer health. For example, 8.1% of the FFS population has a very poor physical health score between 11 and 20, while only 5.6% of the MCO population does. The mental health scores show less variation than the physical component scores, with over 40% of each population scoring in the 51-60 point range, slightly above the US population norm.

Table 4 presents mean PCS and MCS scores stratified by demographic characteristics, including age, sex, original reason for entitlement, Medicaid enrollment, education, and income. The mean scores for the MCO population are consistently higher

⁵ Referring to Table 3, the same columns as in footnote 7, but the four mental health subscales (VTS, SFS, RES, and MHS), we see that MCO enrollees have better health on each of the four measured dimensions of mental health. The smallest MCO advantage, 2.32 points, is for the RES, or role emotional subscale.

Figure 3

Nationally Representative Distribution of Physical Component Scores Among HOS Respondents

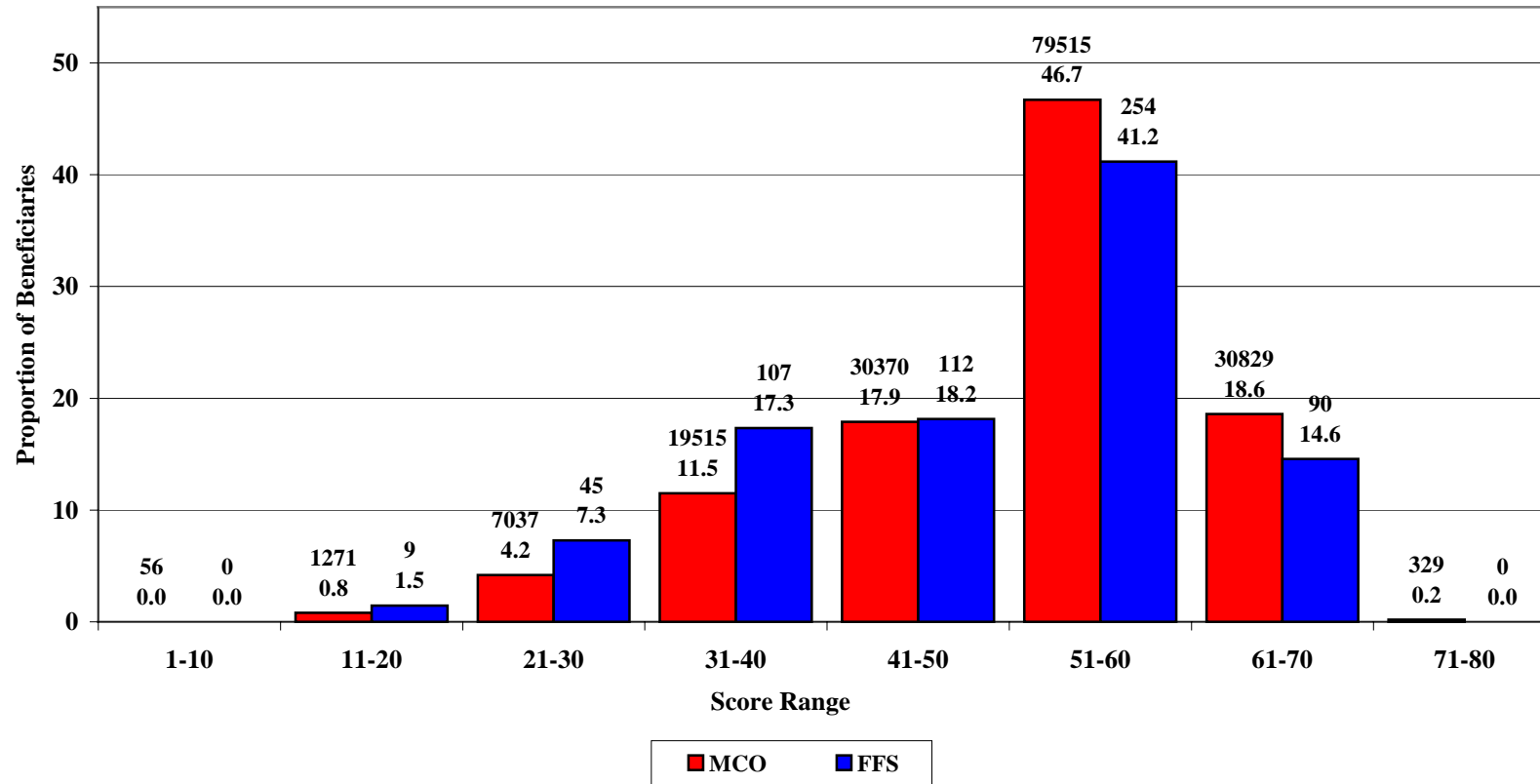


Weighted MCO data; FFS National Sample Only

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 4

Nationally Representative Distribution of Mental Component Scores Among HOS Respondents



Weighted MCO data; FFS National Sample Only

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 4
Nationally Representative Mean Health Scores of HOS Respondents by Demographic Characteristics

	Enrollment-Weighted Managed Care Respondents								Fee-for-Service National Sample							
					95% Confidence Intervals								95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
	Number	Percent	PCS	MCS	Lower	Upper	Lower	Upper	Number	Percent	PCS	MCS	Lower	Upper	Lower	Upper
Entire Sample	168,922	100.0	40.6	51.8	40.5	40.6	51.7	51.8	617	100.0	38.2	48.9	37.2	39.1	48.0	49.9
Gender																
Male	73,015	43.9	41.6	52.2	41.5	41.7	52.1	52.3	247	40.0	38.8	48.9	37.3	40.3	47.4	50.3
Female	95,907	56.1	39.9	51.5	39.8	40.0	51.5	51.6	370	60.0	37.7	49.0	36.4	39.0	47.8	50.2
Race																
White	148,859	87.5	40.8	52.1	40.5	41.0	52.0	52.1	545	88.3	38.5	49.6	37.5	39.6	48.6	50.5
Black	12,283	6.4	38.6	50.0	38.4	38.8	49.8	50.2	45	7.3	34.6	45.0	31.6	37.5	41.5	48.5
Other/Unknown	7,779	6.1	40.8	50.3	40.8	40.8	50.1	50.6	27	4.4	36.4	42.7	32.1	40.8	38.8	46.6
Original Reason For Entitlement																
Aged without ESRD	158,377	94.4	41.3	52.4	41.2	41.3	52.3	52.4	512	83.0	39.8	50.7	38.8	40.9	49.8	51.6
Aged with ESRD	18	0.0	30.8	46.1	26.7	34.8	42.1	50.1	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Disabled Without ESRD	10,518	5.5	30.2	42.5	29.9	30.4	42.2	42.8	105	17.0	29.9	40.2	27.7	32.1	37.7	42.7
Disabled With ESRD	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ESRD Only	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Medicaid Status																
No Medicaid	163,229	96.6	40.9	52.1	40.8	40.9	52.0	52.1	539	87.4	39.1	50.0	38.1	40.2	49.0	50.9
Medicaid Coverage	5,693	3.4	34.2	46.0	33.9	34.5	45.7	46.3	78	12.6	31.3	41.7	29.0	33.6	38.9	44.5
Age																
Under 65	9,885	5.2	29.9	42.3	29.7	30.2	42.0	42.5	65	10.5	31.8	37.5	29.0	34.5	34.2	40.8
65-74	92,542	53.5	43.3	53.1	43.2	43.3	53.0	53.2	261	42.3	41.6	51.4	40.1	43.0	50.1	52.6
75-84	54,088	33.6	39.6	51.9	39.5	39.6	51.8	52.0	214	34.7	37.9	49.8	36.3	39.6	48.3	51.3
85+	12,407	7.7	34.8	49.6	34.6	35.0	49.4	49.8	77	12.5	32.6	48.0	30.2	35.0	45.6	50.3
Marital Status																
Married	97,244	58.0	41.5	52.5	41.4	41.5	52.5	52.6	240	52.1	40.0	50.2	38.5	41.6	48.9	51.6
Divorced	15,099	9.3	39.9	50.8	39.7	40.1	50.6	51.0	28	6.1	37.5	41.4	33.8	41.2	36.8	46.1
Separated	1,628	1.0	37.4	47.3	36.8	38.0	46.7	47.9	*	*	*	*	*	*	*	*
Widowed	47,235	28.4	39.3	51.2	39.2	39.4	51.1	51.3	152	33.0	35.3	49.9	33.3	37.2	48.1	51.7
Never Married	5,368	3.3	41.4	50.5	41.1	41.7	50.2	50.8	36	7.8	41.9	45.1	38.5	45.3	41.0	49.2

Table 4 (continued)
Nationally Representative Mean Health Scores of HOS Respondents by Demographic Characteristics

	Enrollment-Weighted Managed Care Respondents								Fee-for-Service National Sample							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Education																
8th Grade or Less	21,140	12.5	37.4	48.7	37.2	37.5	48.6	48.9	74	16.3	33.8	46.8	31.2	36.4	44.2	49.4
Some high school, but did not graduate	29,696	17.6	38.8	50.3	38.6	38.9	50.1	50.4	72	15.8	35.6	48.7	32.8	38.4	45.8	51.6
High school graduate or GED	57,119	33.6	40.9	52.2	40.8	41.0	52.1	52.3	150	33.0	38.7	47.7	36.8	40.7	45.8	49.6
Some college or 2 year degree	34,324	22.2	41.5	53.0	41.4	41.7	52.9	53.1	87	19.1	40.2	51.6	37.7	42.7	49.4	53.8
4 year college degree	10,991	6.6	43.9	53.9	43.7	44.1	53.7	54.1	34	7.5	43.7	48.6	39.6	47.7	44.6	52.6
More than a 4 year college degree	11,698	7.5	44.2	54.6	44.0	44.4	54.5	54.8	38	8.4	42.8	54.4	39.1	46.5	51.7	57.1
Household Income																
Less than \$5,000	5,525	3.6	36.9	48.2	36.6	37.2	47.8	48.5	24	5.8	32.1	45.0	27.4	36.9	40.2	49.7
\$5,000-\$9,999	18,411	11.4	36.7	48.7	36.5	36.9	48.5	48.9	52	12.5	33.8	46.5	30.6	37.1	43.3	49.8
\$10,000-\$19,999	41,296	27.1	38.9	50.8	38.8	39.0	50.7	50.9	94	22.5	35.8	47.7	33.5	38.1	45.2	50.2
\$20,000-\$29,999	28,820	18.8	41.1	52.6	41.0	41.3	52.5	52.8	82	19.7	38.3	48.9	35.8	40.8	46.6	51.2
\$30,000-\$39,999	17,472	11.9	42.8	53.6	42.6	43.0	53.5	53.8	50	12.0	41.6	49.5	38.4	44.8	45.9	53.0
\$40,000-\$49,999	9,402	6.6	43.5	53.9	43.3	43.7	53.7	54.1	33	7.9	43.1	53.6	38.7	47.6	51.0	56.3
\$50,000-\$79,999	8,988	6.6	44.9	55.1	44.7	45.2	54.9	55.2	30	7.2	45.9	52.1	42.0	49.9	48.4	55.9
\$80,000-\$99,999	1,878	1.3	45.3	54.1	44.8	45.8	53.7	54.5	*	*	*	*	*	*	*	*
\$100,000 or more	2,273	1.5	46.5	54.8	46.1	47.0	54.5	55.2	*	*	*	*	*	*	*	*
Don't Know	18,378	11.1	40.0	50.9	39.8	40.2	50.8	51.1	41	9.8	36.5	47.2	32.7	40.3	43.3	51.1
Residence is:																
Owned or being bought by you	122,175	75.3	41.5	52.5	41.4	41.5	52.5	52.6	325	73.1	39.8	49.8	38.5	41.2	48.6	51.0
Owned or being bought by someone in your family other than you	11,099	6.9	37.7	50.1	37.4	37.9	49.8	50.3	30	6.7	36.2	45.7	31.7	40.7	41.0	50.5
Rented for money	26,390	15.9	38.7	50.0	38.5	38.8	49.9	50.2	76	17.1	33.6	46.5	31.0	36.2	43.7	49.3
Not owned and one in which you live without payment of rent	3,214	1.9	38.6	49.8	38.1	39.0	49.4	50.2	12	2.7	40.0	51.5	33.1	46.9	45.0	58.0
Nursing home (write-in response)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*	*	*	*	*	*	*	*
Retirement Community																
Yes	19,032	13.8	39.6	51.1	39.5	39.8	50.9	51.2	51	11.3	36.5	46.4	33.1	39.9	43.0	49.7
No	144,213	86.2	40.8	52.0	40.7	40.9	52.0	52.1	399	88.7	38.8	49.6	37.6	40.0	48.5	50.7
Medical Services Provided (if in a Retirement Community)																
Yes	3,338	11.4	38.4	49.4	38.0	38.8	49.0	49.7	17	34.0	30.1	44.7	24.8	35.4	37.9	51.5
No	21,478	88.6	39.4	50.5	39.2	39.5	50.4	50.7	33	66.0	39.4	46.9	35.3	43.6	43.1	50.8

Table 4 (continued)

Nationally Representative Mean Health Scores of HOS Respondents by Demographic Characteristics

	Enrollment-Weighted Managed Care Respondents								Fee-for-Service National Sample							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Who Completed the Survey																
Person to whom the survey was addressed	143,970	89.3	41.4	52.6	41.3	41.5	52.6	52.7	451	82.4	40.3	50.1	39.2	41.4	49.1	51.1
Family member or relative	16,108	9.7	34.9	46.5	34.7	35.1	46.3	46.7	82	15.0	30.8	46.1	28.1	33.5	43.3	48.8
Friend	955	0.6	33.9	44.9	33.1	34.6	44.1	45.7	*	*	*	*	*	*	*	*
Professional caregiver	500	0.3	34.9	47.6	34.0	35.9	46.6	48.6	*	*	*	*	*	*	*	*
Enrollment Category¹																
Enrolled less than 6 mos.	26,845	14.3	40.5	51.8	40.4	40.7	51.6	51.9	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Enrolled 6 mos.-1 yr.	24,332	9.5	41.2	51.5	41.0	41.3	51.4	51.7	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Enrolled for over 1 yr.	117,745	76.2	40.6	51.9	40.5	40.7	51.8	52.0	617	100.0	38.2	48.9	37.2	39.1	48.0	49.9

* Data suppressed because of fewer than 10 respondents.

¹ This is the length of enrollment for the beneficiary in the plan they are enrolled in at the time of the survey. For FFS beneficiaries, it is their continuous period of FFS enrollment.

OUTPUT: RUN018, RUN022, RUN023 and NER125

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

than those for the FFS population, indicating better health among managed care enrollees, even within demographic categories. For example, the mean PCS for Medicare managed care enrollees dually enrolled in Medicaid is 34.2 compared to a corresponding FFS mean of 31.3 (95% confidence interval 29.0 to 33.6). One exception to the general pattern is that the PCS for MCO enrollees under-age-65 (currently entitled by disability) is lower than among the same age group in the FFS population (MCO PCS of 29.9 versus FFS PCS of 31.8). However, this difference is not statistically significant at the 5% level as indicated by the FFS 95% confidence interval of 29.0 to 34.5. (Note that the under-age-65 FFS mean is based on only 65 respondents.) With the exception of the under-age-65, all other age groups show smaller PCS and MCS differences between managed care and FFS than the overall difference. This indicates that the age distributions of the two populations are explaining some of the overall difference.

HCFA staff asked Health Economics Research, Inc. to compare fee-for-service (FFS)/managed care organization (MCO) health status for "core" Medicare beneficiaries defined as those 75 to 79 years old. Unfortunately, the number of 75 to 79 year old respondents in the FFS national sample is small, only 133. This results in a lack of statistical power to detect FFS/MCO differences among 75 to 79 year olds. But we did compare mean PCS and MCS for this age group. The PCS difference between managed care and FFS is very small, 40.4 for MCO enrollees versus 40.0 for FFS. The FFS 95% confidence interval is 37.9 to 42.0, so the null hypothesis of no FFS/MCO difference cannot be rejected for 75 to 79 year olds. But the small FFS sample size provides little statistical power to detect differences. The MCS difference is 52.2 MCO versus 50.6

FFS (CI=48.8 to 52.4). Again the null hypothesis of no difference cannot be rejected, but there is little statistical power.

Figures 5 and 6 show the mean PCS and MCS scores based on the number of chronic conditions the beneficiary reported. Thirteen chronic conditions were self-reported in the survey; no FFS beneficiary suffered from more than 11 of these conditions simultaneously. The average PCS and MCS scores for the FFS population are again lower than MCO means for almost all numbers of chronic conditions (some FFS means are based on very few respondents and so show substantial random variability).

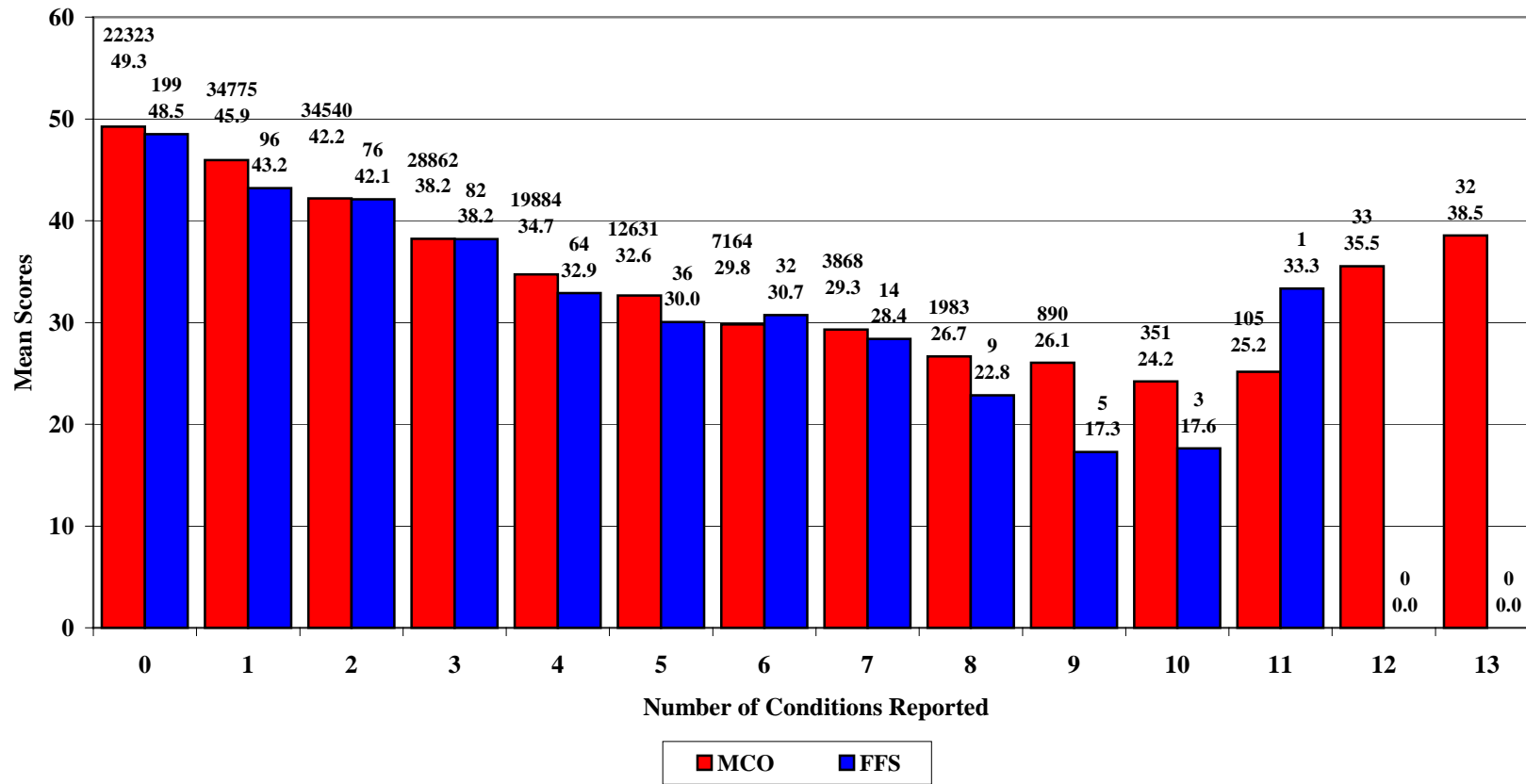
Table 5 presents prevalence and mean PCS and MCS scores by population for each chronic condition. The self-reported prevalence of all chronic conditions with the exception of emphysema is higher in the FFS population, indicating greater burden of chronic disease among Medicare FFS enrollees⁶. FFS PCS and MCS means by chronic condition are consistently lower than MCO population means, indicating poorer physical and mental health among FFS enrollees, even controlling for the presence of specific chronic conditions. For example, MCO enrollees reporting congestive heart failure (CHF) appear to be in poorer physical and mental health than FFS enrollees reporting CHF. However, many of the differences are not statistically significant because of small sample sizes in our FFS national sample.

Tables 6 and 7 present the distribution of beneficiaries based on their ability to perform six activities of daily living (ADLs), namely, walking, eating, bathing, dressing,

⁶ The lower reported prevalence of emphysema in FFS may be an anomalous statistic resulting from small FFS sample sizes. With the larger sample sizes of the entire FFS sample, emphysema is reported to be more prevalent in FFS. See Section 3.2.

Figure 5

Nationally Representative Average Physical Component Scores
By Number of Chronic Conditions Reported

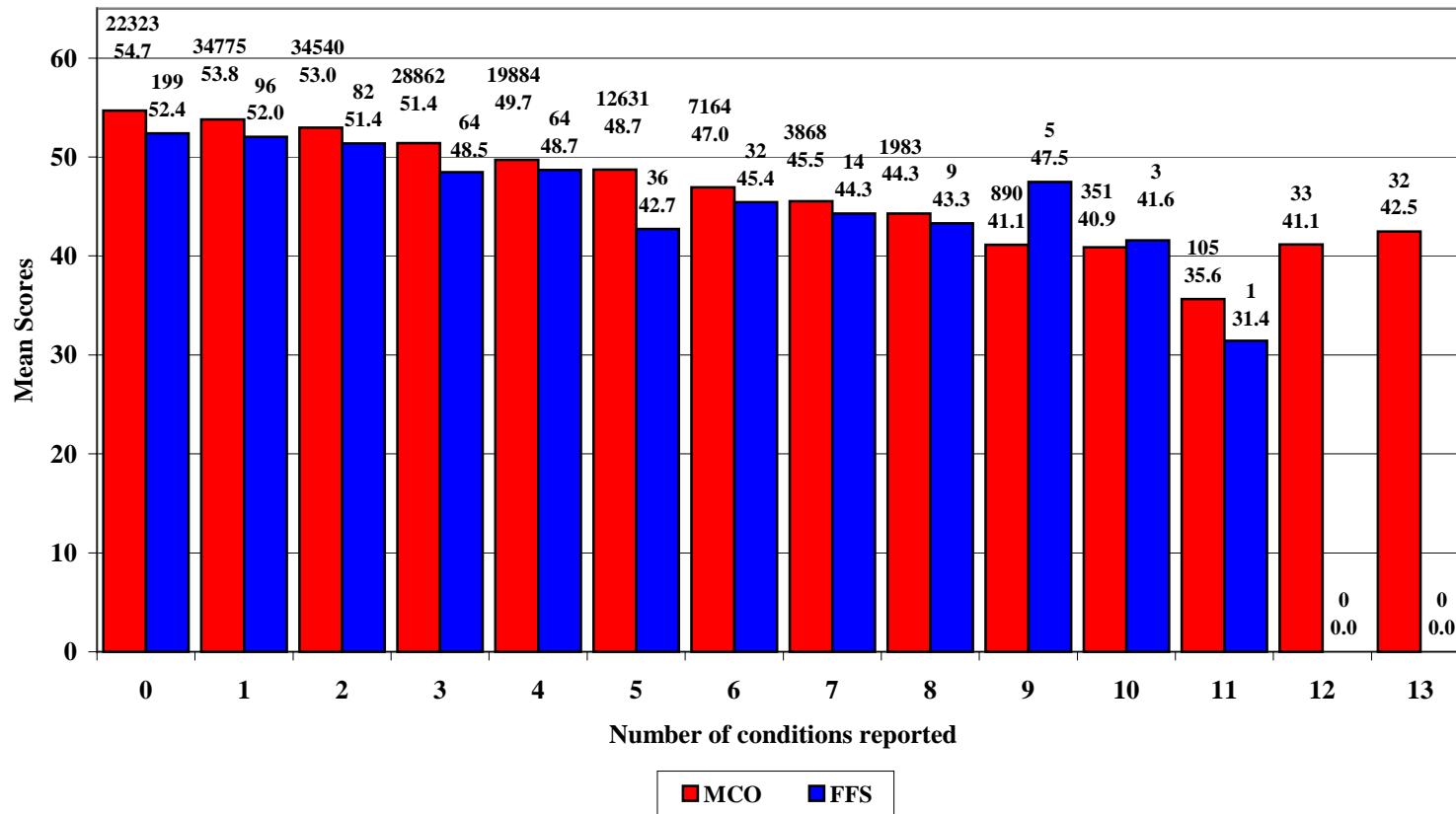


Weighted MCO data; FFS National Sample Only

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care
(May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 6

Nationally Representative Average Mental Component Scores
by Number of Chronic Conditions Reported



Weighted MCO data; FFS National Sample Only

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 5

Nationally Representative Frequencies and Mean Health Scores for HOS Respondents with Specified Chronic Conditions

		Enrollment-Weighted Managed Care Respondents								Fee-for-Service National Sample							
						95% Confidence Intervals								95% Confidence Intervals			
		Number	Percent	PCS	MCS	PCS		MCS		Number	Percent	PCS	MCS	PCS		MCS	
						Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
High blood pressure	Yes	87,830	52.1	38.7	51.1	38.7	38.8	51.0	51.1	261	55.2	35.3	48.0	33.9	36.7	46.6	49.4
	No	78,433	47.9	42.8	52.8	42.7	42.9	52.7	52.8	212	44.8	42.1	50.7	40.5	43.7	49.2	52.2
Angina	Yes	26,862	15.7	34.8	49.4	34.7	35.0	49.3	49.5	87	18.9	33.6	46.1	31.0	36.1	43.4	48.7
	No	137,674	84.3	41.8	52.4	41.8	41.9	52.3	52.4	374	81.1	39.6	49.9	38.3	40.8	48.8	51.0
CHF	Yes	11,796	6.7	30.9	47.1	30.7	31.1	46.9	47.3	40	8.7	27.1	46.0	23.5	30.7	42.4	49.7
	No	152,727	93.3	41.5	52.3	41.4	41.5	52.2	52.3	417	91.2	39.6	49.6	38.5	40.8	48.5	50.7
Heart Attack	Yes	17,780	10.4	34.8	49.4	34.6	35.0	49.2	49.5	64	13.9	33.5	46.6	30.1	36.8	43.6	49.7
	No	146,266	89.6	41.4	52.2	41.4	41.5	52.2	52.3	396	86.0	39.2	49.6	38.0	40.4	48.5	50.7
Other Heart Condition	Yes	35,361	20.9	36.1	49.7	36.0	36.3	49.6	49.8	113	24.4	34.0	46.8	31.8	36.1	44.5	49.0
	No	129,332	79.1	41.9	52.5	41.9	42.0	52.4	52.5	350	75.6	39.9	50.1	38.6	41.1	48.9	51.3
Stroke	Yes	13,441	8.0	33.5	47.5	33.3	33.7	47.3	47.7	48	10.3	30.9	44.6	27.6	34.1	41.1	48.0
	No	151,636	92.0	41.3	52.3	41.3	41.4	52.2	52.3	418	89.7	39.2	49.7	38.0	40.3	48.6	50.8
Emphysema	Yes	21,686	13.3	34.0	48.7	33.9	34.2	48.6	48.9	58	12.6	29.9	44.1	26.8	33.0	41.2	47.1
	No	143,612	86.7	41.8	52.4	41.7	41.9	52.3	52.5	403	87.4	39.6	50.0	38.4	40.8	48.9	51.1
Crohn's Disease	Yes	9,305	5.4	34.3	46.9	34.0	34.5	46.6	47.1	31	6.8	32.9	44.4	28.7	37.1	40.1	48.6
	No	155,084	94.6	41.1	52.2	41.0	41.1	52.2	52.3	424	93.2	39.0	49.8	37.8	40.2	48.7	50.9
Arthritis-Hip	Yes	63,577	37.4	34.9	50.4	34.8	35.0	50.3	50.5	197	42.0	32.2	47.8	30.7	33.8	46.2	49.4
	No	102,221	62.6	44.1	52.8	44.0	44.2	52.7	52.8	272	58.0	42.9	50.4	41.6	44.2	49.1	51.7
Arthritis-Hand	Yes	57,194	34.4	36.1	50.1	36.0	36.2	50.0	50.2	180	38.4	32.5	46.4	30.9	34.2	44.6	48.1
	No	108,280	65.6	43.1	52.8	43.0	43.1	52.7	52.8	288	61.5	42.1	51.0	40.8	43.4	49.8	52.3

Table 5 (continued)

Nationally Representative Frequencies and Mean Health Scores for HOS Respondents with Specified Chronic Conditions

		Enrollment-Weighted Managed Care Respondents								Fee-for-Service National Sample							
		Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
						PCS		MCS						PCS		MCS	
						Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Sciatica																	
	Yes	38,193	23.2	34.5	49.1	34.4	34.6	48.9	49.2	140	30.0	33.1	47.1	31.1	35.1	45.1	49.1
	No	126,375	76.8	42.6	52.8	42.5	42.7	52.7	52.8	327	70.0	40.6	50.1	39.4	41.9	48.9	51.3
Diabetes																	
	Yes	27,868	16.4	36.2	49.5	36.1	36.4	49.4	49.6	84	17.8	32.9	47.6	30.6	35.1	44.9	50.2
	No	138,078	83.6	41.5	52.3	41.5	41.6	52.3	52.4	387	82.2	39.7	49.7	38.4	40.9	48.6	50.8
Any Cancer																	
	Yes	21,650	13.1	38.1	50.6	38.0	38.3	50.4	50.7	75	15.8	34.4	44.2	31.7	37.1	41.5	47.0
	No	144,595	86.9	41.0	52.1	41.0	41.1	52.0	52.1	398	84.1	39.1	50.2	37.9	40.3	49.1	51.3

OUTPUT: RUN029 and NERI25

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
 Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 6
Nationally Representative Functional Status of HOS Respondents

Enrollment-Weighted Managed Care Respondents										Fee-for-Service National Sample							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals				
					PCS		MCS						PCS		MCS		
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper	
<u>Difficulty* in:</u>																	
None	98,086	58.6	47.5	54.5	47.4	47.4	54.5	54.5	237	49.8	46.9	54.3	45.9	48.0	53.3	55.3	
1-2 ADLs	44,211	26.4	33.8	50.9	33.7	33.7	50.8	50.8	135	28.4	33.6	46.6	32.1	35.1	44.6	48.7	
3-4 ADLs	14,910	8.9	26.7	45.5	26.5	26.5	45.3	45.3	66	13.9	25.9	44.1	23.9	27.8	41.3	46.8	
5-6 ADLs	10,157	6.1	25.8	40.2	25.6	25.6	40.0	40.0	38	8.0	23.4	35.2	21.1	25.7	32.2	38.3	
*Includes 'unable to perform'																	
<u>Unable to perform:</u>																	
None	160,376	95.8	41.2	52.2	41.1	41.2	52.2	52.3	451	94.8	39.1	49.8	38.0	40.2	48.8	50.8	
1-2 ADLs	4,638	2.8	25.8	42.9	25.5	26.1	42.9	43.3	16	3.4	26.2	41.6	21.9	30.6	35.8	47.4	
3-4 ADLs	902	0.6	26.0	41.6	25.4	26.6	41.6	42.5	*	*	*	*	*	*	*	*	
5-6 ADLs	1,448	0.8	33.5	42.6	32.9	34.1	42.6	43.3	*	*	*	*	*	*	*	*	

* Data suppressed because of fewer than 10 respondents.

NOTES:

ADL is activity of daily living.

PCS is physical component score

MCS is mental component score

OUTPUT: RUN018 and NERI25

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 7

Nationally Representative Distribution of HOS Respondents by Activities of Daily Living

Because of a health or physical problem, do you have any difficulty doing the following activities?	Enrollment-Weighted Managed Care Respondents								Fee-for-Service National Sample							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
<u>Bathing</u>																
Unable to do	3,993	2.3	29.0	41.0	28.6	29.3	40.6	41.4	11	2.3	20.7	35.6	16.6	24.9	28.9	42.3
Have difficulty	20,044	11.8	26.4	43.9	26.2	26.5	43.7	44.1	87	18.4	25.3	42.8	23.6	27.0	40.2	45.3
No Difficulty	142,760	85.8	43.0	53.3	42.9	43.0	53.2	53.3	376	79.3	41.9	51.0	40.8	43.0	50.0	52.1
<u>Dressing</u>																
Unable to do	2,821	1.6	30.1	41.8	29.7	30.5	41.3	42.3	11	2.3	23.0	34.9	17.5	28.5	27.8	41.9
Have difficulty	17,149	10.1	26.0	43.1	25.8	26.1	42.9	43.3	70	14.8	25.1	41.3	23.3	27.0	38.5	44.2
No Difficulty	146,784	88.3	42.6	53.1	42.5	42.6	53.0	53.1	393	82.9	41.1	51.0	40.0	42.2	50.0	52.0
<u>Eating</u>																
Unable to do	1,633	1.0	33.7	43.9	33.1	34.3	43.3	44.5	*	*	*	*	*	*	*	*
Have difficulty	8,165	4.9	28.4	40.8	28.2	28.6	40.5	41.1	35	7.4	26.2	33.9	23.3	29.1	30.8	37.0
No Difficulty	156,674	94.1	41.4	52.6	41.4	41.5	52.5	52.6	430	91.3	39.6	50.8	38.4	40.7	49.8	51.8
<u>Getting in or out of chairs</u>																
Unable to do	2,261	1.3	30.3	42.9	29.8	30.8	42.3	43.5	11	2.3	22.5	34.6	16.4	28.6	28.3	40.8
Have difficulty	42,461	25.4	29.5	47.3	29.4	29.5	47.1	47.4	135	28.4	28.2	43.2	26.6	29.7	41.2	45.2
No Difficulty	121,791	73.3	44.8	53.7	44.7	44.9	53.6	53.7	330	69.4	43.0	52.1	41.9	44.2	51.1	53.2
<u>Walking</u>																
Unable to do	4,272	2.6	27.3	43.4	27.0	27.6	43.0	43.8	18	3.8	22.9	36.6	19.6	26.1	31.0	42.2
Have difficulty	53,893	32.1	29.7	48.1	29.7	29.8	48.0	48.2	192	40.6	29.5	45.0	28.2	30.8	43.3	46.7
No Difficulty	108,343	65.2	46.6	54.1	46.6	46.7	54.0	54.1	263	55.6	45.8	53.1	44.7	46.9	52.0	54.2
<u>Using the toilet</u>																
Unable to do	1,985	1.2	31.5	42.8	30.9	32.0	42.2	43.4	*	*	*	*	*	*	*	*
Have difficulty	12,033	7.5	26.9	42.4	26.7	27.0	42.2	42.6	49	10.3	25.8	38.2	23.3	28.2	35.2	41.2
No Difficulty	152,677	91.3	42.0	52.8	41.9	42.0	52.7	52.8	420	88.3	40.1	50.7	39.0	41.2	49.7	51.7

* Data suppressed because of fewer than 10 respondents.

OUTPUT: RUN018 and NER125

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

toileting, and transferring in and out of chairs. Table 6 tabulates each population based on the number of activities a beneficiary has difficulty with or is unable to perform, while Table 7 presents frequencies and mean PCS and MCS scores by individual ADL. Fifty nine percent of MCO enrollees have no difficulty performing any of the six ADLs versus 50% of FFS enrollees. Eight percent of FFS enrollees have difficulty performing 5 or 6 ADLs versus 6% of MCO enrollees. A higher proportion of FFS enrollees are unable to perform ADLs, although the proportions of "unable to perform" are small in both populations. The proportion of FFS enrollees "unable to do" or "having difficulty" is equal or greater than the proportion of managed care enrollees for all individual ADLs (Table 7). These statistics consistently indicate higher levels of functional impairment among FFS enrollees.

PCS and MCS are lower among FFS enrollees controlling for functional limitations, although MCO/FFS differences are small and often not statistically significant. Although some MCO/FFS difference remains holding functional status constant, the difference is substantially reduced. For example, among beneficiaries with no difficulty in any ADL, the FFS PCS is 0.8 points lower than managed care (Table 6) versus 2.5 points lower among all beneficiaries (Table 4). Similarly, the FFS MCS is 0.2 points lower than managed care among beneficiaries with no impairments (Table 6), versus 2.9 points among all enrollees (Table 4). The physical functioning subscale is, of course, a component of the SF-36 PCS and MCS summary scales. Hence, it is perhaps not surprising that FFS/MCO PCS and MCS differences are reduced holding constant functional limitations (one expects a positive correlation between the PF score and the

number of ADL limitations). However, physical functioning is just one of eight SF-36 subscales.

Table 8 presents the distribution of FFS and MCO populations on self-rated general health status. Respondents were asked, “In general, would you say your health is: excellent, very good, good, fair, or poor?” A substantially higher proportion of MCO respondents report their health as excellent or very good (31.4% MCO versus 25.4% FFS), and good (40.2% MCO versus 33.7% FFS), whereas a higher proportion of FFS respondents report fair or poor health (41.0% FFS versus 28.4% MCO). MCO/FFS differences in PCS and MCS are attenuated holding constant self-reported general health status.

3.2 Comparison of Respondents to the Fee-for-Service and Managed Care Health Outcomes Surveys

Our second comparison is of respondents to the FFS and managed care Health Outcomes Surveys. As discussed in Section 2.2 above, our comparison of HOS respondents includes all the 10 subsamples of the FFS HOS (one national random sample, five small geographic area samples, and four group practice samples), and all MCO HOS respondents, unweighted by plan size. Thus, the statistics presented disproportionately reflect Medicare FFS enrollees in certain geographic areas⁷ and

⁷ The FFS HOS small geographic area samples were drawn from beneficiaries residing in certain counties in the states of Georgia, Pennsylvania, Arizona, Washington state, and Wisconsin. See McCall et al. (2000) for more details.

Table 8

Nationally Representative Distribution of Self-Rated General Health Status Among HOS Respondents

Enrollment-Weighted Managed Care Respondents									Fee-for-Service National Sample							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Self-Rated General Health Status																
Excellent	10,425	6.5	53.5	57.5	53.4	53.7	57.3	57.6	29	4.7	54.7	57.7	53.6	55.8	55.6	59.7
Very good	41,564	24.9	49.2	56.1	49.1	49.3	56.0	56.1	128	20.7	48.7	56.0	47.4	50.1	54.8	57.2
Good	67,070	40.2	41.5	53.1	41.4	41.6	53.0	53.1	208	33.7	41.3	51.8	40.1	42.6	50.5	53.0
Fair	39,165	22.6	30.6	47.1	30.5	30.7	46.9	47.2	188	30.5	30.2	44.2	28.9	31.4	42.6	45.8
Poor	10,085	5.8	24.0	38.3	23.8	24.1	38.0	38.5	65	10.5	23.2	35.9	21.6	24.8	33.0	38.9

OUTPUT: RUN018 and NER125

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

visiting certain group practices⁸, and MCO enrollees in smaller health plans (since enrollees in smaller health plans have a higher probability of being eligible for the MCO HOS).

Nevertheless, the summary comparisons in Section 2.5 indicate that mean MCO health status scores weighted for plan size and mean FFS scores for the random national sample do not differ substantially from mean scores for unweighted MCO enrollees and the entire FFS HOS, respectively. In any case, the comparisons presented in this section are valid as a simple description of differences in FFS and MCO respondents to the HOS. Because results for FFS and MCO respondents (this section) do not differ very much from results for FFS and MCO populations (Section 3.1), we do not present a detailed discussion of results for respondents. Rather, we provide a brief discussion with a focus on instances where the results for respondents differ from the results for populations.

The set of tables and figures we provide for respondents in this section (Tables 9-14 and Figures 7-12) have the same format as the ones we presented for populations in the previous section (Tables 2 and 4-8 and Figures 1-6). Table 9 is a duplicate of Table 2, except based on unweighted managed care respondents and all 10 FFS subsamples. Consistent with the Table 2 results for populations, we see that the under-age-65 disabled, age 85 and over, and the poor (Medicaid enrollees) comprise a smaller share of Medicare MCO HOS respondents than FFS respondents. Comparing Tables 2 and 9, it is clear that FFS respondents from all 10 FFS subsamples (Table 9) have a lower proportion

⁸ The group practices are located in the states of Wisconsin, Arizona, Pennsylvania, and Washington state. Beneficiaries seen by group practice physicians comprised the sampling frames for the group practice samples. See McCall et al. (2000) for more details.

Table 9

HOS Sample Distribution by Demographic Characteristics

	Managed Care Respondents ¹					Fee-for-Service Respondents ²				
	Sample Frame	Number of Respondents	Percentage Response Rate ³	Percentage of Survey Frame ⁴	Percentage of Respondents ⁵	Sample Frame	Number of Respondents	Percentage Response Rate	Percentage of Survey Frame	Percentage of Respondents
Entire Sample	279,135	168,922	60.5	100.0	100.0	10,000	6,634	66.3	100.0	100.0
Gender										
Male	120,656	73,015	60.5	43.2	43.2	4,070	2,738	67.3	40.7	41.3
Female	158,479	95,907	60.5	56.8	56.8	5,930	3,896	65.7	59.3	58.7
Race										
Unknown	1,093	538	49.2	0.4	0.3	21	14	66.7	0.2	0.2
White	240,095	148,859	62.0	86.0	88.1	9,264	6,225	67.2	92.6	93.8
Black	24,121	12,283	50.9	8.6	7.3	490	261	53.3	4.9	3.9
Other	4,883	2,500	51.2	1.7	1.5	91	55	60.4	0.9	0.8
Asian	2,779	1,751	63.0	1.0	1.0	56	33	58.9	0.6	0.5
Hispanic	5,960	2,875	48.2	2.1	1.7	62	36	58.1	0.6	0.5
North American Native	204	115	56.4	0.1	0.1	16	10	62.5	0.2	0.2
Original Reason For Entitlement										
Unknown	*	*	*	*	*	*	*	*	*	*
Aged without ESRD	259,937	158,377	60.9	93.1	93.8	8,986	6,048	67.3	89.9	91.2
Aged with ESRD	37	18	48.6	0.0	0.0	0	0	0.0	0.0	0.0
Disabled Without ESRD	19,145	10,518	54.9	6.9	6.2	1,010	583	57.7	10.1	8.8
Disabled With ESRD	*	*	*	*	*	*	*	*	*	*
ESRD Only	*	*	*	*	*	*	*	*	*	*
Medicaid Status										
No Medicaid	266,880	163,229	61.2	95.6	96.6	8,828	5,981	67.8	88.3	90.2
Medicaid Coverage	12,255	5,693	46.5	4.4	3.4	1,172	653	55.7	11.7	9.8
Age										
Under 65	18,154	9,885	54.5	6.5	5.9	965	554	57.4	9.7	8.4
65-74	145,244	92,542	63.7	52.0	54.8	3,935	2,823	71.7	39.4	42.6
75-84	90,387	54,088	59.8	32.4	32.0	3,748	2,529	67.5	37.5	38.1
85+	25,350	12,407	48.9	9.1	7.3	1,352	728	53.8	13.5	11.0

* Data suppressed because of fewer than 10 respondents.

¹ Includes all managed care survey recipients, and uses unweighted data.² Includes all fee-for-service survey recipients. This sample is not representative of the nation as a whole.³ Response rate for that characteristic (e.g. The response rate for males is the total number of men who returned surveys divided by the total number of men who received a survey)⁴ Representativeness of that characteristic in the survey pool (the number of men who were sent surveys divided by the total number of surveys sent out)⁵ Representativeness of that characteristic in the survey sample (the number of men who responded to the survey divided by the total number of survey respondents)

OUTPUT: RUN001

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/ Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

of blacks, Medicaid enrollees, under-age-65 disabled, and very old (age 85+) than the single FFS national sample analyzed in the preceding section (Table 2). Hence, we would expect the entire FFS sample analyzed in this section to have better average health status than the FFS national sample. Conversely, the weighted and unweighted Medicare managed care samples (Tables 2 versus 9) show very similar characteristics, and we do not expect much difference in health status characteristics.

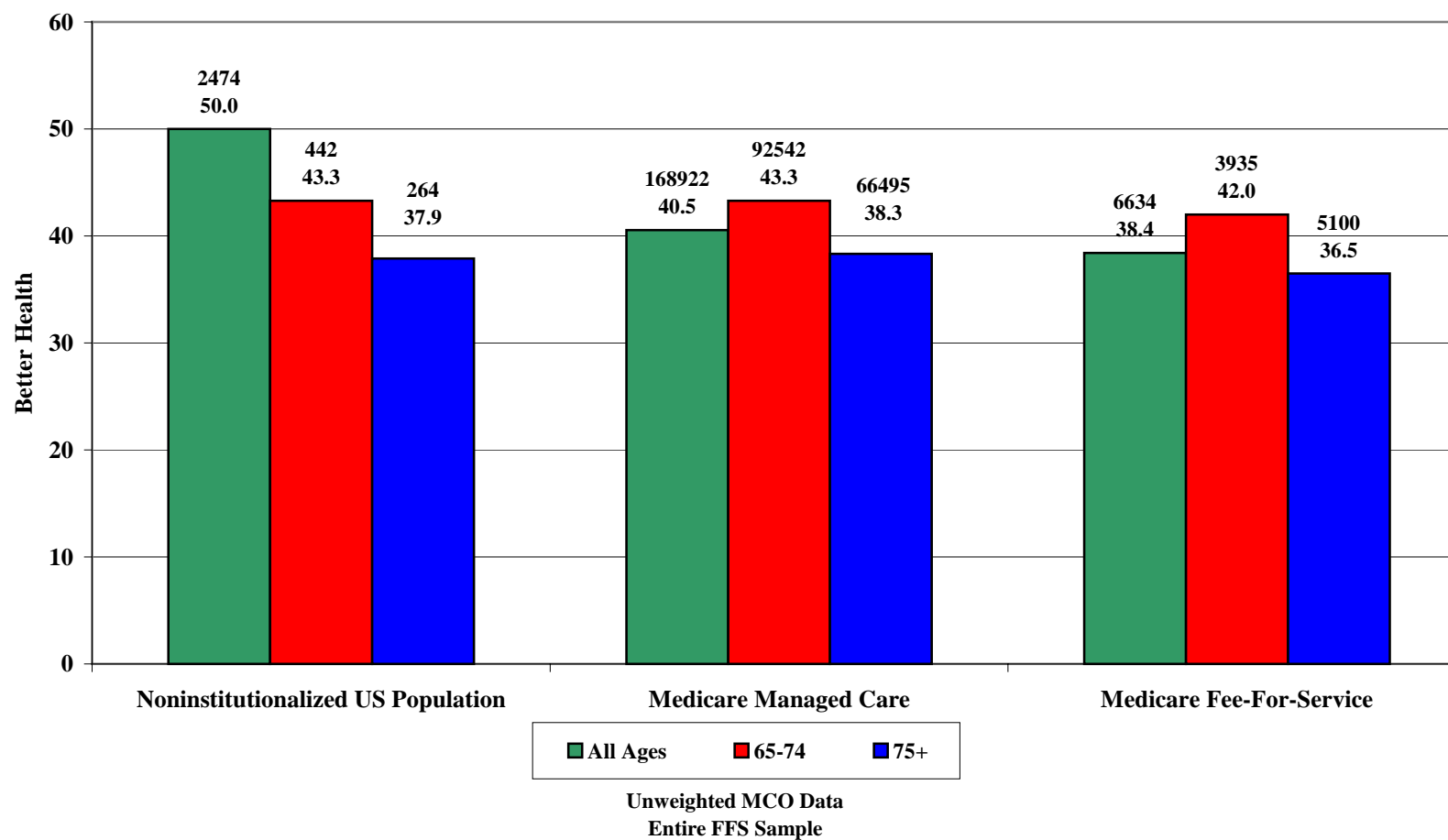
Figures 7 and 8 repeat Figures 1 and 2 using the unweighted MCO data and the entire FFS sample. The results for the PCS scores are similar. But the mean MCS for the entire FFS sample is higher than the national norm in Figure 8 whereas mean MCS for the FFS national sample is lower than the national norm was lower in Figure 2. The better mental health status of the entire FFS sample as compared to the national FFS sample is presumably related to the better socioeconomic status of the entire sample as discussed in the preceding paragraph.

Figures 9 and 10 again show the distribution of the PCS and MCS scores, using the unweighted MCO data and the entire FFS sample. Results are similar to the analogous Figures 3 and 4 for the MCO and FFS populations, except that the better mental health status of FFS respondents as opposed to FFS population is again apparent in Figure 10 versus Figure 4. The average of MCO respondents' mental health is better than the average for FFS respondents, but the MCO advantage is smaller than for the MCO versus FFS populations.

Table 10 presents unweighted data for all HOS respondents, which may be compared to the data that represents populations shown in Table 4. Results again are

Figure 7

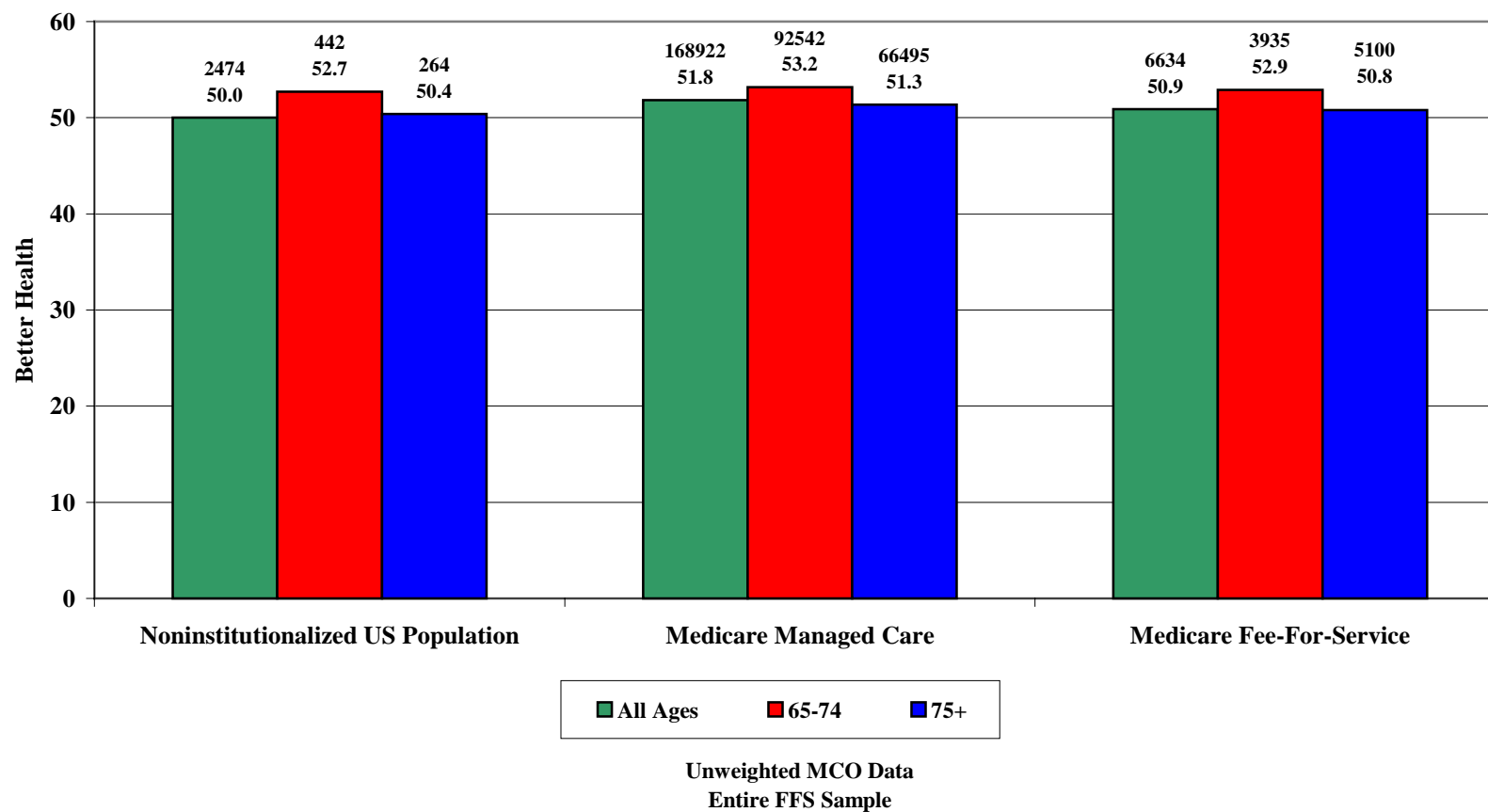
A Comparison of HOS Respondents' Mean Physical Component Scores to US Norms



SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 8

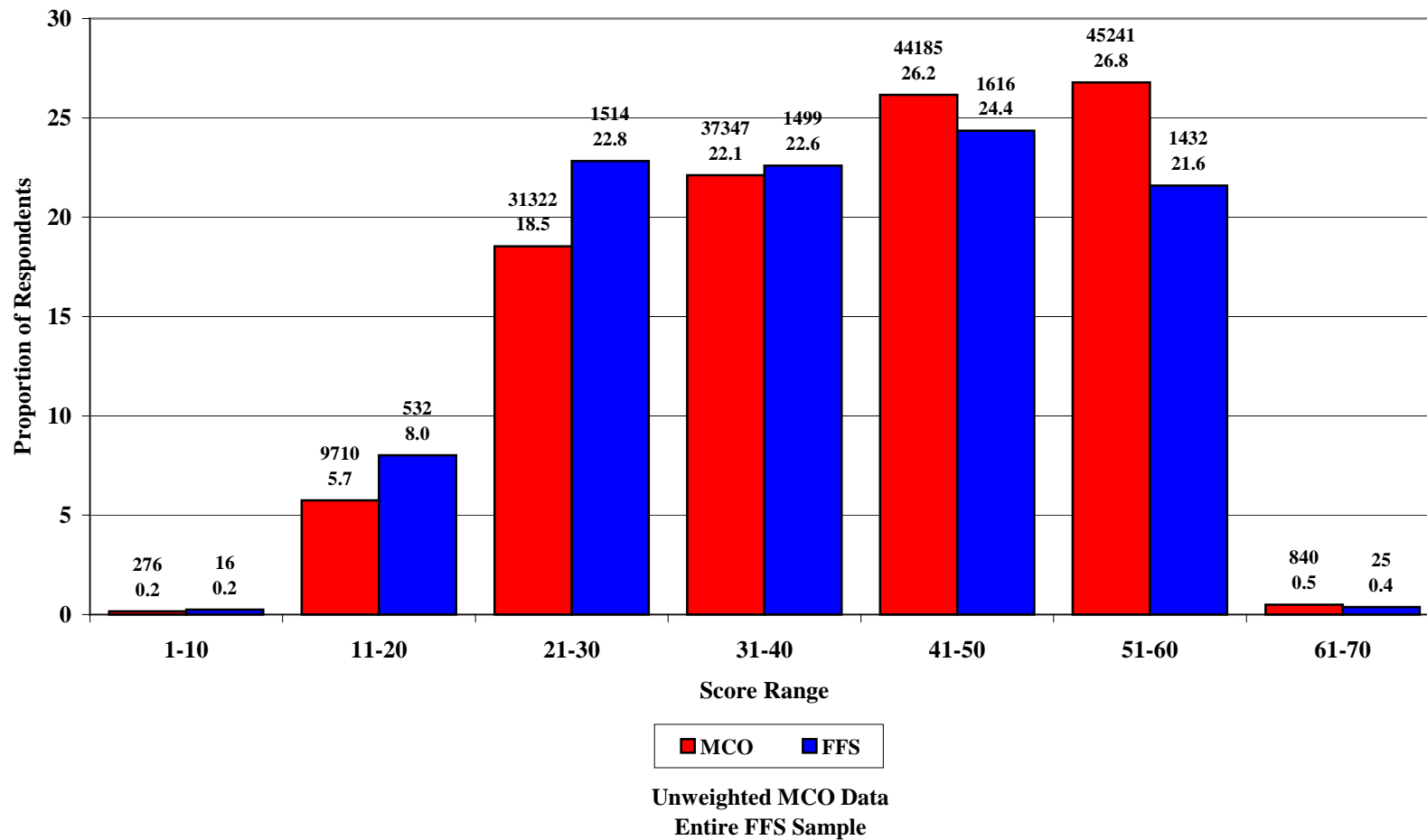
A Comparison of HOS Respondents' Mean Mental Component Score to US Norms



SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 9

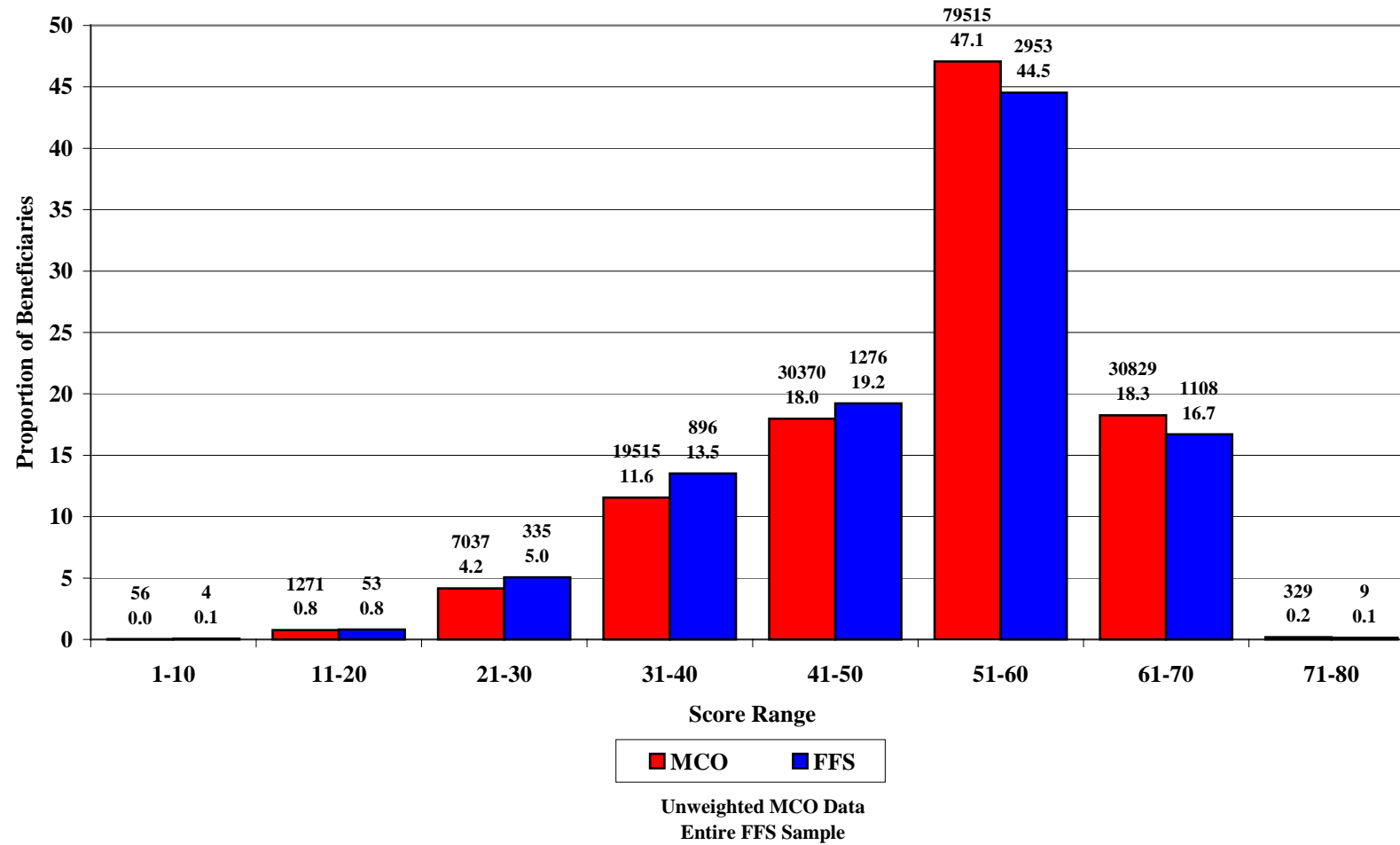
Distribution of Physical Component Scores Among HOS Respondents



SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 10

Distribution of Mental Component Scores Among HOS Respondents



SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 10

Mean Health Scores of HOS Respondents by Demographic Characteristics

	Managed Care Respondents								Fee-for-Service Respondents							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
All Respondents	168,922	100.0	40.5	51.8	40.5	40.6	51.8	51.9	6,634	100.0	38.4	50.9	38.1	38.7	50.6	51.1
Gender																
Male	73,015	43.2	41.4	52.2	41.3	41.5	52.1	52.2	2,738	41.3	39.4	51.0	38.9	39.8	50.6	51.4
Female	95,907	56.8	39.9	51.6	39.8	40.0	51.5	51.6	3,896	58.7	37.7	50.8	37.3	38.1	50.4	51.1
Race																
White	148,859	88.1	40.7	52.1	40.7	40.8	52.0	52.1	6,225	93.8	38.5	51.1	38.2	38.8	50.8	51.4
Black	12,283	7.3	38.0	49.9	37.8	38.3	49.7	50.1	261	3.9	35.7	47.3	34.3	37.0	45.8	48.8
Other	2,500	1.5	41.5	50.9	41.0	42.0	50.5	51.4	55	0.8	37.4	49.7	34.0	40.9	46.4	52.9
Asian	1,751	1.0	43.1	52.5	42.5	43.6	52.1	53.0	33	0.5	40.5	51.0	36.7	44.3	47.3	54.7
Hispanic	2,875	1.7	39.1	48.3	38.7	39.5	47.9	48.8	36	0.5	35.5	40.0	31.7	39.4	36.3	43.8
North American Native	115	0.1	35.1	49.7	32.8	37.5	47.5	52.0	10	0.2	42.6	48.3	35.7	49.6	41.1	55.4
Unknown	538	0.3	40.7	51.6	39.6	41.7	50.7	52.5	14	0.2	32.0	56.1	26.2	37.8	51.7	60.4
Original Reason For Entitlement																
Aged without ESRD	158,377	93.8	41.3	52.4	41.2	41.3	52.4	52.5	6,048	91.2	39.1	51.8	38.7	39.4	51.5	52.0
Aged with ESRD	18	0.0	31.7	46.4	26.2	37.1	41.0	51.7	0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
Disabled Without ESRD	10,518	6.2	29.8	43.0	29.6	30.0	42.7	43.2	583	8.8	31.6	41.7	30.6	32.6	40.6	42.8
Disabled With ESRD	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ESRD Only	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Medicaid Status																
No Medicaid	163,229	96.6	40.8	52.1	40.7	40.9	52.0	52.1	5,981	90.2	39.1	51.6	38.7	39.4	51.3	51.8
Medicaid Coverage	5,693	3.4	33.2	45.1	32.9	33.5	44.8	45.4	653	9.8	32.4	44.5	31.5	33.3	43.5	45.4
Age																
Under 65	9,885	5.9	29.7	42.7	29.5	30.0	42.4	42.9	965	8.4	31.9	41.6	31.1	32.6	40.7	42.4
65-74	92,542	54.8	43.3	53.2	43.2	43.4	53.1	53.2	3,935	42.6	42.0	52.9	41.6	42.3	52.6	53.2
75-84	54,088	32.0	39.2	51.8	39.1	39.3	51.7	51.8	3,748	38.1	37.5	51.5	37.1	37.9	51.1	51.8
85+	12,407	7.3	34.3	49.5	34.1	34.5	49.3	49.7	1,352	11.0	32.6	48.2	32.0	33.2	47.6	48.8
Marital Status																
Married	97,244	58.4	41.5	52.6	41.4	41.5	52.5	52.6	3,153	57.7	39.6	52.2	39.1	40.0	51.8	52.5
Divorced	15,099	9.1	39.5	50.4	39.3	39.7	50.2	50.5	335	6.1	36.3	46.6	34.9	37.6	45.2	47.9

Table 10 (continued)

Mean Health Scores of HOS Respondents by Demographic Characteristics

	Managed Care Respondents								Fee-for-Service Respondents							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Separated	1,628	1.0	37.6	47.3	37.0	38.2	46.7	47.9	49	0.9	35.3	43.0	31.7	38.8	39.7	46.4
Widowed	47,235	28.4	39.1	51.2	39.0	39.2	51.1	51.3	1,572	28.8	36.3	50.5	35.7	36.9	49.9	51.0
Never Married	5,368	3.2	41.0	50.4	40.6	41.3	50.1	50.7	349	6.4	38.5	47.4	37.3	39.8	46.0	48.8
Education																
8th Grade or Less	21,140	12.8	37.0	48.6	36.8	37.1	48.4	48.8	752	13.9	34.5	48.0	33.6	35.4	47.2	48.9
Some high school, but did not graduate	29,696	18.0	38.6	50.3	38.5	38.7	50.2	50.4	739	13.7	35.3	49.0	34.5	36.2	48.2	49.8
High school graduate or GED	57,119	34.6	40.9	52.2	40.8	41.0	52.1	52.3	1,858	34.3	38.5	50.9	38.0	39.1	50.4	51.4
Some college or 2 year degree	34,324	20.8	41.5	53.1	41.4	41.6	52.9	53.2	1,100	20.3	39.9	52.1	39.2	40.6	51.5	52.7
4 year college degree	10,991	6.7	44.0	54.1	43.8	44.2	53.9	54.3	449	8.3	40.7	53.5	39.6	41.8	52.6	54.4
More than a 4 year college degree	11,698	7.1	44.7	54.6	44.5	44.9	54.4	54.8	516	9.5	42.0	53.7	41.0	43.0	52.9	54.5
Household Income																
Less than \$5,000	5,525	3.6	36.5	47.5	36.2	36.8	47.1	47.8	229	4.7	33.3	45.2	31.8	34.8	43.7	46.8
\$5,000-\$9,999	18,411	12.1	36.4	48.6	36.2	36.6	48.5	48.8	572	11.6	32.8	46.6	31.9	33.7	45.6	47.6
\$10,000-\$19,999	41,296	27.1	38.8	50.8	38.7	38.9	50.7	50.9	1,099	22.4	36.4	49.8	35.7	37.1	49.2	50.5
\$20,000-\$29,999	28,820	18.9	41.3	52.6	41.1	41.4	52.5	52.7	913	18.6	38.4	51.4	37.6	39.2	50.7	52.0
\$30,000-\$39,999	17,472	11.5	42.9	53.7	42.8	43.1	53.5	53.8	583	11.9	40.5	52.8	39.6	41.5	52.0	53.6
\$40,000-\$49,999	9,402	6.2	43.9	54.3	43.7	44.2	54.1	54.5	371	7.5	42.1	54.0	40.9	43.4	53.0	54.9
\$50,000-\$79,999	8,988	5.9	45.3	54.8	45.1	45.5	54.6	55.0	407	8.3	43.1	53.6	42.0	44.3	52.7	54.5
\$80,000-\$99,999	1,878	1.2	45.7	54.8	45.2	46.2	54.5	55.2	75	1.5	46.7	55.3	44.6	48.9	53.7	56.9
\$100,000 or more	2,273	1.5	46.8	55.5	46.4	47.2	55.1	55.8	137	2.8	43.8	54.3	41.8	45.8	52.8	55.8
Don't Know	18,378	12.1	39.7	51.2	39.5	39.9	51.1	51.4	531	10.8	36.8	49.5	35.7	37.8	48.6	50.5
Residence is:																
Owned or being bought by you	122,175	75.0	41.5	52.6	41.5	41.6	52.5	52.6	3,897	73.8	39.8	52.1	39.4	40.2	51.8	52.4
Owned or being bought by someone in your family other than you	11,099	6.8	37.6	50.2	37.3	37.8	50.0	50.4	368	7.0	35.2	48.2	34.0	36.4	47.0	49.3
Rented for money	26,390	16.2	38.0	49.8	37.8	38.1	49.7	50.0	821	15.5	34.6	47.5	33.8	35.4	46.6	48.3
Not owned and one in which you live without payment of rent	3,214	2.0	37.8	50.2	37.4	38.2	49.8	50.6	147	2.8	34.4	50.5	32.5	36.3	48.6	52.5
Nursing home (write-in response)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	48	0.9	27.1	40.2	24.4	29.7	36.7	43.7
Retirement Community																
Yes	19,032	11.7	38.7	50.7	38.5	38.9	50.6	50.9	908	17.2	37.3	50.6	36.5	38.1	49.9	51.4
No	144,213	88.4	40.8	52.0	40.7	40.9	52.0	52.1	4,367	82.8	38.6	51.1	38.2	39.0	50.8	51.5

Table 10 (continued)

Mean Health Scores of HOS Respondents by Demographic Characteristics

	Managed Care Respondents								Fee-for-Service Respondents							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Medical Services Provided (if in a Retirement Community)																
Yes	3,338	13.4	37.7	49.2	37.3	38.2	48.8	49.6	220	24.6	35.4	50.0	33.8	37.1	48.5	51.5
No	21,478	86.5	38.5	50.1	38.4	38.7	49.9	50.2	673	75.4	37.9	50.8	37.0	38.8	50.0	51.6
Who Completed the Survey																
Person to whom the survey was addressed	143,970	89.2	41.4	52.6	41.3	41.4	52.5	52.6	5,136	84.4	39.9	52.2	39.6	40.2	51.9	52.5
Family member or relative	16,108	10.0	34.3	46.8	34.1	34.5	46.7	47.0	804	13.2	30.8	45.4	30.0	31.6	44.5	46.2
Friend	955	0.6	34.7	45.6	33.9	35.4	44.8	46.5	55	0.9	34.8	41.2	31.8	37.7	37.8	44.6
Professional caregiver	500	0.3	34.7	45.2	33.6	35.7	44.1	46.3	85	1.4	34.1	46.1	31.7	36.5	43.4	48.7
Other (write-in response)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*	*	*	*	*	*	*	*
Enrollment Category¹																
Enrolled less than 6 mos.	26,845	15.9	41.3	52.0	41.1	41.4	51.9	52.2	0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
Enrolled 6 mos.-1 yr.	24,332	14.4	40.9	51.7	40.7	41.0	51.6	51.9	0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
Enrolled for over 1 yr.	117,745	69.7	40.3	51.8	40.2	40.4	51.6	52.0	6,634	100.0	38.4	50.9	38.1	38.7	50.6	51.1

* Data suppressed because of fewer than 10 respondents.

¹ This is the length of enrollment for the beneficiary in the plan they are enrolled in at the time of the survey. For FFS beneficiaries, it is their continuous period of FFS enrollment.

OUTPUT: RUN002 and RUN003

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

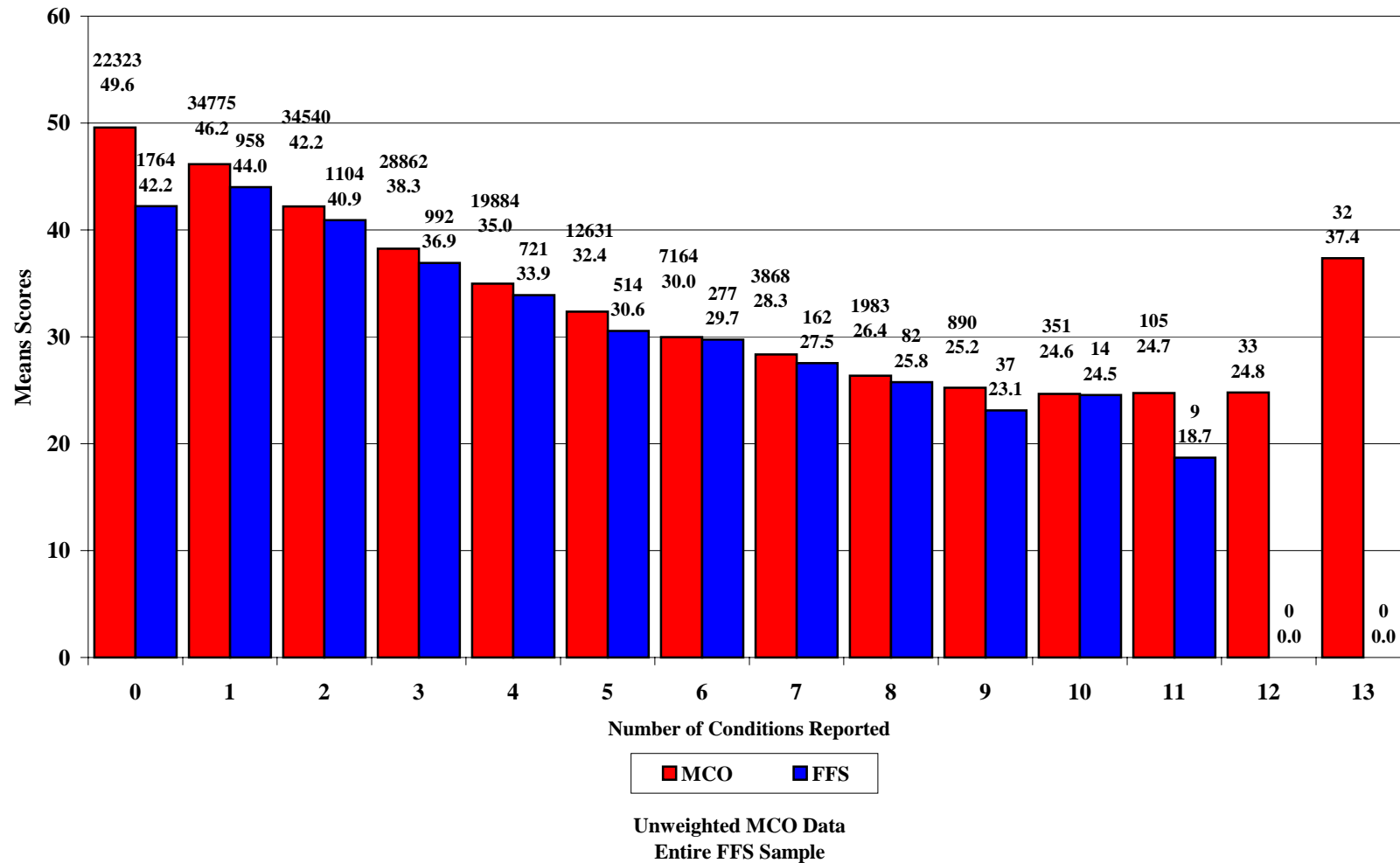
similar with the exception of the somewhat higher mental health status of all FFS respondents (Table 10) versus respondents to the national random sample (Table 4). Table 10 confirms that the entire FFS HOS sample has a higher average educational and income level than the FFS national sample alone.

Figures 11 and 12 duplicate Figures 5 and 6, but using unadjusted data for all HOS respondents. Results for physical health status (Figures 11 and 5) are similar. But the mental health status of all FFS respondents with higher counts of multiple chronic conditions (6 or more) exceeds that of MCO respondents similarly burdened with chronic disease (Figure 12), while this is not consistently true for the MCO/FFS population comparison (Figure 6). FFS sample sizes of beneficiaries with large numbers of chronic conditions are relatively limited, so not too much should be concluded from this result. But it is another manifestation of the better mental health status of all FFS respondents versus the FFS population (single national random sample).

Table 11 compares the unweighted MCO and entire FFS data by chronic condition. Table 5 is the corresponding table for MCO and FFS populations. Chronic disease prevalence is mixed among all FFS respondents (Table 11) compared to the nationally representative FFS sample (Table 5). Interestingly, emphysema is more prevalent among FFS respondents than the FFS population, and more prevalent among FFS respondents than MCO respondents (Table 11). This may indicate that the lower prevalence of emphysema in the FFS national sample than in the weighted MCO sample is a statistical fluke due to small FFS national sample size.

Figure 11

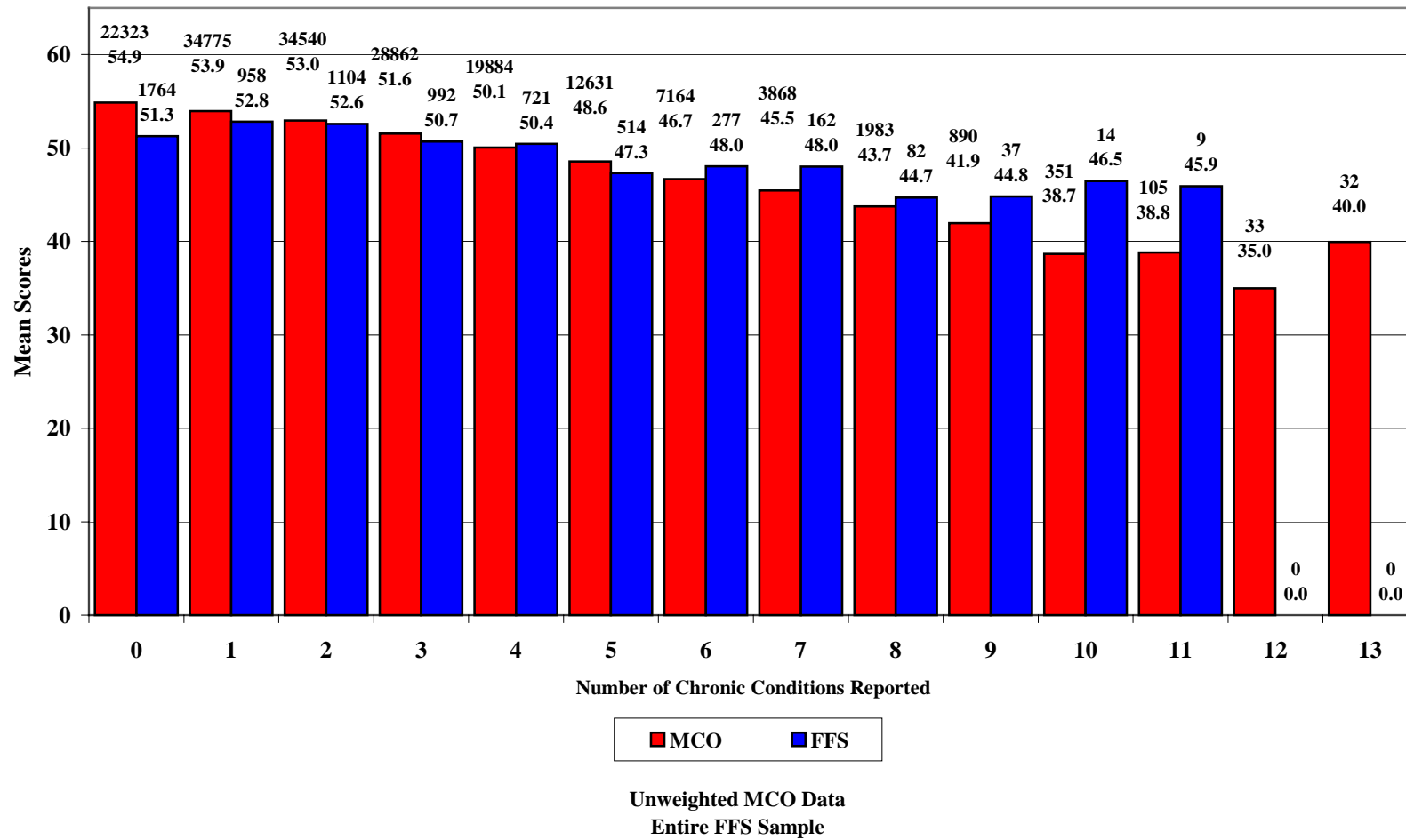
Average Physical Component Scores by Number of Chronic Conditions Reported, HOS Respondents



SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Figure 12

Average Mental Component Score by Number of Chronic Conditions Reported, HOS Respondents



SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 11

Frequencies and Mean Health Scores for HOS Respondents with Specified Chronic Conditions

		Managed Care Respondents								Fee-For-Service Respondents							
		Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
						PCS		MCS						PCS		MCS	
						Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
High blood pressure																	
	Yes	87,830	52.8	38.6	51.0	38.6	38.7	51.0	51.1	2,856	52.4	36.7	50.7	36.3	37.2	50.3	51.1
	No	78,433	47.2	42.7	52.8	42.6	42.8	52.7	52.9	2,596	47.6	40.1	51.4	39.6	40.6	51.0	51.8
Angina																	
	Yes	26,862	16.3	34.7	49.3	34.5	34.8	49.1	49.4	992	18.4	33.2	49.3	32.4	33.9	48.6	50.0
	No	137,674	83.7	41.8	52.4	41.8	41.9	52.4	52.5	4,389	81.6	39.6	51.4	39.2	40.0	51.1	51.7
CHF																	
	Yes	11,796	7.2	30.7	47.2	30.5	30.9	47.0	47.4	458	8.5	28.9	47.4	28.0	29.9	46.4	48.5
	No	152,727	92.8	41.4	52.3	41.4	41.5	52.2	52.3	4,905	91.5	39.3	51.4	39.0	39.7	51.1	51.7
Heart Attack																	
	Yes	17,780	10.8	34.6	49.3	34.4	34.8	49.1	49.5	691	12.9	32.9	49.3	32.0	33.8	48.5	50.1
	No	146,266	89.2	41.4	52.3	41.3	41.5	52.2	52.3	4,653	87.1	39.3	51.3	38.9	39.6	51.0	51.7
Other Heart Condition																	
	Yes	35,361	21.5	35.9	49.5	35.7	36.0	49.4	49.6	1,401	25.9	34.1	49.6	33.4	34.7	49.0	50.2
	No	129,332	78.5	41.9	52.6	41.9	42.0	52.5	52.6	4,005	74.1	39.9	51.6	39.5	40.3	51.3	51.9
Stroke																	
	Yes	13,441	8.1	33.0	47.3	32.8	33.2	47.1	47.5	555	10.3	30.6	47.2	29.7	31.5	46.2	48.2
	No	151,636	91.9	41.3	52.3	41.2	41.4	52.3	52.4	4,850	89.7	39.3	51.5	38.9	39.6	51.2	51.8
Emphysema																	
	Yes	21,686	13.1	33.8	48.6	33.6	33.9	48.4	48.7	744	13.8	31.9	48.2	31.1	32.8	47.4	49.1
	No	143,612	86.8	41.7	52.4	41.6	41.7	52.4	52.5	4,657	86.2	39.4	51.5	39.1	39.8	51.2	51.9
Crohn's Disease																	
	Yes	9,305	5.7	34.1	46.4	33.9	34.3	46.2	46.6	386	7.2	32.4	47.2	31.2	33.5	46.0	48.5
	No	155,084	94.4	41.0	52.3	41.0	41.1	52.2	52.3	4,979	92.8	38.9	51.4	38.6	39.3	51.1	51.7
Arthritis-Hip																	
	Yes	63,577	38.3	34.9	50.4	34.8	35.0	50.3	50.5	2,231	41.0	33.0	49.9	32.5	33.5	49.5	50.4
	No	102,221	61.6	44.1	52.8	44.1	44.2	52.7	52.9	3,215	59.0	42.0	51.8	41.6	42.5	51.4	52.1
Arthritis-Hand																	
	Yes	57,194	34.5	35.9	50.0	35.8	36.0	49.9	50.1	1,968	36.2	33.8	49.7	33.3	34.3	49.2	50.2
	No	108,280	65.4	43.1	52.9	43.0	43.1	52.8	52.9	3,473	63.8	40.9	51.8	40.5	41.3	51.5	52.2

Table 11 (continued)

Frequencies and Mean Health Scores for HOS Respondents with Specified Chronic Conditions

		Managed Care Respondents								Fee-For-Service Respondents							
		Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
						PCS		MCS						PCS		MCS	
						Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Sciatica																	
	Yes	38,193	23.2	34.3	48.9	34.2	34.4	48.8	49.0	1,419	26.2	33.2	49.0	32.6	33.8	48.4	49.6
	No	126,375	76.8	42.5	52.8	42.5	42.6	52.7	52.9	3,988	73.8	40.2	51.7	39.9	40.6	51.4	52.1
Diabetes																	
	Yes	27,868	16.8	36.0	49.5	35.9	36.2	49.4	49.7	948	17.4	34.0	49.4	33.2	34.7	48.6	50.1
	No	138,078	83.2	41.5	52.3	41.4	41.6	52.3	52.4	4,502	82.6	39.3	51.4	38.9	39.6	51.1	51.7
Any Cancer																	
	Yes	21,650	13.0	38.0	50.9	37.8	38.1	50.7	51.0	971	17.8	35.8	50.9	35.1	36.6	50.3	51.6
	No	144,595	87.0	41.0	52.0	40.9	41.0	52.0	52.1	4,483	82.2	38.9	51.0	38.5	39.2	50.7	51.4

OUTPUT: RUN002 and RUN003

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
 Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Tables 12 and 13 (compare to Tables 6 and 7) present the functional status of FFS and MCO respondents. FFS respondents (Table 12) have considerably better functional status than the FFS population (Table 6). Fifty nine percent of all FFS respondents—the same as the MCO percentage--have no difficulty in any ADLs compared to 50% for the FFS population. But a higher proportion of FFS respondents have difficulty with larger numbers of activities of daily living (3-4 or 5-6 ADLs compared to 1-2 ADLs) as compared to MCO respondents (Table 12). So the overall functional status of FFS respondents is worse than of MCO respondents.

Table 14 presents the distribution of self-rated general health status among all MCO and FFS respondents to the HOS. The FFS distribution is again better among all respondents (Table 14) than among the single national FFS sample (Table 8). In particular, a higher proportion of all FFS respondents (Table 14) rate their health as "good" compared to "fair" or "poor" than in the single national FFS sample (Table 8). But health ratings remain worse among all FFS HOS respondents compared to MCO respondents.

Table 12

Functional Status of HOS Respondents

	Managed Care Respondents								Fee-for-Service Respondents							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
Difficulty* in:																
None	98,086	58.6	47.4	54.5	47.4	47.4	54.5	54.5	3,939	59.4	44.3	53.1	43.9	44.6	52.8	53.4
1-2 ADLs	44,211	26.4	33.6	50.7	33.6	33.6	50.7	50.7	1,547	23.3	33.1	50.5	32.7	33.6	50.0	51.1
3-4 ADLs	14,910	8.9	26.5	45.4	26.5	26.5	45.4	45.4	632	9.5	26.4	45.8	25.8	27.0	44.9	46.7
5-6 ADLs	10,157	6.1	25.4	40.5	25.4	25.4	40.5	40.5	516	7.8	24.1	41.3	23.4	24.8	40.3	42.3
*Includes 'unable to perform'																
Unable to perform:																
None	160,376	95.8	41.1	52.2	41.1	41.1	52.2	52.2	6,276	94.6	39.2	51.3	38.9	39.5	51.1	51.6
1-2 ADLs	4,638	2.8	25.8	43.2	25.8	25.8	43.2	43.2	234	3.5	24.8	44.1	23.7	25.8	42.6	45.7
3-4 ADLs	902	0.5	26.0	40.5	26.0	26.0	40.5	40.5	51	0.8	23.9	39.3	21.7	26.2	35.8	42.7
5-6 ADLs	1,448	0.9	32.8	43.4	32.8	32.8	43.4	43.4	73	1.1	25.4	40.2	23.0	27.7	37.5	42.9

NOTES:

ADL is activity of daily living.

PCS is physical component score

MCS is mental component score

OUTPUT: RUN002, RUN003, RUN020 and RUN024

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
 Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 13

Distribution of HOS Respondents by Activities of Daily Living

Because of a health or physical problem, do you have any difficulty doing the following activities?	Managed Care Respondents								Fee-For-Service Respondents							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
<u>Bathing</u>																
Unable to do	3,993	2.4	28.4	41.7	28.0	28.7	41.3	42.2	231	4.2	24.6	42.1	23.4	25.8	40.6	43.6
Have difficulty	20,044	12.0	26.3	43.8	26.2	26.4	43.6	44.0	904	16.5	26.0	45.0	25.4	26.5	44.2	45.7
No Difficulty	142,760	85.6	42.9	53.3	42.9	43.0	53.2	53.3	4,340	79.3	41.7	52.7	41.4	42.0	52.4	53.0
<u>Dressing</u>																
Unable to do	2,821	1.7	29.5	41.6	29.1	29.9	41.1	42.1	162	3.0	24.4	41.3	22.9	25.8	39.4	43.2
Have difficulty	17,149	10.3	25.8	43.2	25.7	26.0	43.0	43.4	757	13.8	25.2	44.1	24.6	25.8	43.2	44.9
No Difficulty	146,784	88.0	42.5	53.1	42.5	42.6	53.0	53.1	4,547	83.2	41.1	52.5	40.7	41.4	52.2	52.8
<u>Eating</u>																
Unable to do	1,633	1.0	33.5	44.1	32.9	34.1	43.5	44.8	67	1.2	27.7	40.9	25.0	30.4	38.1	43.6
Have difficulty	8,165	4.9	28.0	40.2	27.8	28.2	40.0	40.5	406	7.4	26.9	40.6	26.0	27.9	39.4	41.7
No Difficulty	156,674	94.2	41.3	52.6	41.3	41.4	52.5	52.6	4,977	91.3	39.5	52.0	39.1	39.8	51.7	52.3
<u>Getting in or out of chairs</u>																
Unable to do	2,261	1.4	30.1	42.8	29.6	30.6	42.3	43.4	119	2.2	24.8	40.4	23.1	26.5	38.2	42.5
Have difficulty	42,461	25.5	29.3	47.2	29.3	29.4	47.1	47.4	1,705	31.2	28.6	47.0	28.2	29.1	46.5	47.6
No Difficulty	121,791	73.1	44.7	53.6	44.6	44.8	53.6	53.7	3,637	66.6	43.4	53.2	43.1	43.8	52.9	53.5
<u>Walking</u>																
Unable to do	4,272	2.6	27.2	43.6	26.9	27.6	43.2	44.0	204	3.7	24.2	41.7	23.0	25.3	39.9	43.4
Have difficulty	53,893	32.4	29.6	48.1	29.5	29.7	48.0	48.2	2,065	37.8	28.8	48.0	28.4	29.2	47.5	48.5
No Difficulty	108,343	65.0	46.5	54.1	46.5	46.6	54.0	54.1	3,195	58.4	45.5	53.5	45.1	45.8	53.2	53.8
<u>Using the toilet</u>																
Unable to do	1,985	1.2	31.4	43.2	30.9	31.9	42.6	43.8	98	1.8	26.1	39.8	24.2	28.1	37.6	42.0
Have difficulty	12,033	7.2	26.6	42.4	26.4	26.7	42.2	42.7	559	10.2	25.9	42.7	25.1	26.6	41.7	43.7
No Difficulty	152,677	91.6	41.8	52.7	41.7	41.9	52.7	52.8	4,807	87.9	40.1	52.2	39.8	40.4	51.9	52.4

OUTPUT: RUN002 and RUN003

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.

Table 14

Distribution of Self-Rated General Health Status Among HOS Respondents

	Managed Care Respondents								Fee-For-Service Respondents							
	Number	Percent	PCS	MCS	95% Confidence Intervals				Number	Percent	PCS	MCS	95% Confidence Intervals			
					PCS		MCS						PCS		MCS	
					Lower	Upper	Lower	Upper					Lower	Upper	Lower	Upper
<u>Self-Rated General Health Status</u>																
Excellent	10,425	6.2	53.7	57.6	53.5	53.8	57.5	57.7	312	4.7	54.0	57.1	53.3	54.7	56.3	57.9
Very good	41,564	24.7	49.2	56.1	49.2	49.3	56.0	56.2	1,378	20.8	48.5	56.2	48.1	49.0	55.8	56.6
Good	67,070	39.9	41.5	53.2	41.4	41.6	53.1	53.2	2,556	38.6	40.8	52.9	40.4	41.1	52.5	53.3
Fair	39,165	23.3	30.7	46.9	30.6	30.7	46.8	47.0	1,787	27.0	29.6	46.9	29.2	30.0	46.4	47.4
Poor	10,085	6.0	23.6	38.7	23.4	23.7	38.4	38.9	590	8.9	22.8	38.6	22.3	23.4	37.7	39.6

OUTPUT: RUN002 and RUN003

SOURCE: Health Economics Research, Inc. analysis of the Round One Joint Managed Care (May-September 1998 data)/
Fee-For-Service (June 1998-January 1999 data) Health Outcomes Survey (HOS) Database.